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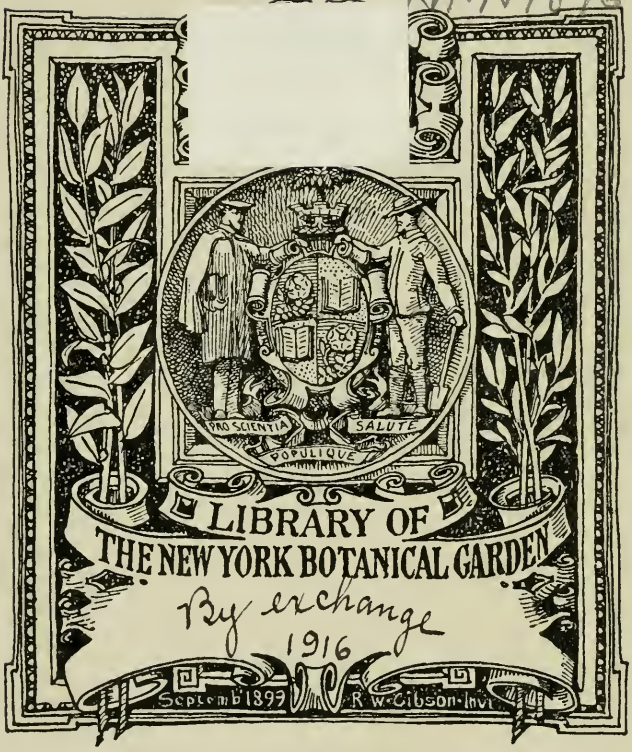

SMITHSONIAN INSTITUTION

UNITED STATES NATIONAL MUSEUM

REPORT ON THE PROGRESS AND CONDITION OF THE UNITED STATES NATIONAL MUSEUM FOR THE YEAR ENDING JUNE 30, 1915

WASHINGTON
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UNITED STATES NATIONAL MUSEUM,
UNDER DIRECTION OF THE SMITHSONIAN INSTITUTION,
Washington, D. C., October 22, 1915.

SIR: I have the honor to submit herewith a report upon the present condition of the United States National Museum and upon the work accomplished in its various departments during the fiscal year ending June 30, 1915.

Very respectfully,

RICHARD RATHBUN,
Assistant Secretary, in charge of the National Museum.

Dr. CHARLES D. WALCOTT,
Secretary, Smithsonian Institution.

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REPORT ON THE PROGRESS AND CONDITION OF THE UNITED STATES NATIONAL MUSEUM FOR THE YEAR ENDING JUNE 30, 1915.

By Richard Rathbun,

Assistant Secretary of the Smithsonian Institution, in charge of the U. S. National Museum.

INCEPTION AND HISTORY.

The Congress of the United States in the act of August 10, 1846, founding the Smithsonian Institution recognized that an opportunity was afforded, in carrying out the large-minded design of Smithson, to provide for the custody of the museum of the Nation. To this new establishment was therefore intrusted the care of the national collections, a course that time has fully justified.

In the beginning the cost of maintaining the museum side of the Institution's work was wholly paid from the Smithsonian income; then for a time the Government bore a share, and during the past 39 years Congress has voted the entire funds for the expenses of the museum, thus furthering one of the primary means "for the increase and diffusion of knowledge among men" without encroaching upon the resources of the Institution.

The museum idea was inherent in the establishment of the Smithsonian Institution, which in its turn was based upon a 10 years' discussion in Congress and the advice of the most distinguished scientific men, educators, and intellectual leaders of the Nation of 70 years ago. It is interesting to note how broad and comprehensive were the views which actuated our lawmakers in determining the scope of the Museum, a fact especially remarkable when it is recalled that at that date no museum of considerable size existed in the United States, and the museums of England and of the continent of Europe were still to a large extent without a developed plan, although containing many rich collections.

The Congress which passed the act of foundation enumerated as within the scope of the Museum "all objects of art and of foreign and curious research and all objects of natural history, plants, and geological and mineralogical specimens belonging to the United

States," thus stamping the Museum at the very outset as one of the widest range and at the same time as the Museum of the United States. It was also appreciated that additions would be necessary to the collections then in existence, and provision was made for their increase by the exchange of duplicate specimens, by donations, and by other means.

If the wisdom of Congress in so fully providing for a museum in the Smithsonian law challenges attention, the interpretation put upon this law by the Board of Regents within less than six months from the passage of the act can not but command admiration. In the early part of September, 1846, the Regents took steps toward formulating a plan of operations. The report of the committee appointed for this purpose, submitted in December and January following, shows a thorough consideration of the subject in both the spirit and letter of the law. It would seem not out of place to cite here the first pronouncement of the board with reference to the character of the Museum:

"In obedience to the requirements of the charter,[1] which leaves little discretion in regard to the extent of accommodations to be provided, your committee recommend that there be included in the building a museum of liberal size, fitted up to receive the collections destined for the Institution. * * *

"As important as the cabinets of natural history by the charter required to be included in the Museum, your committee regard its ethnological portion, including all collections that may supply items in the physical history of our species, and illustrate the manners, customs, religions, and progressive advance of the various nations of the world; as, for example, collections of skulls, skeletons, portraits, dresses, implements, weapons, idols, antiquities, of the various races of man. * * * In this connexion your committee recommend the passage of resolutions asking the cooperation of certain public functionaries and of the public generally in furtherance of the above objects.

"Your committee are further of opinion that in the Museum, if the funds of the Institution permit, might judiciously be included various series of models illustrating the progress of some of the most useful inventions; such, for example, as the steam engine from its earliest and rudest form to its present most improved state; but this they propose only so far as it may not encroach on ground already covered by the numerous models in the Patent Office.

"Specimens of staple materials, of their gradual manufacture, and of the finished product of manufactures and the arts may also, your

[1] Since the Institution was not chartered in a legal sense, but established by Congress, the use of the word "charter" in this connection was not correct.

committee think, be usefully introduced. This would supply opportunity to examine samples of the best manufactured articles our country affords, and to judge her gradual progress in arts and manufactures. * * *

"The gallery of art, your committee think, should include both paintings and sculpture, as well as engravings and architectural designs; and it is desirable to have in connexion with it one or more studios in which young artists might copy without interruption, being admitted under such regulations as the board may prescribe. Your committee also think that, as the collection of paintings and sculpture will probably accumulate slowly, the room destined for a gallery of art might properly and usefully meanwhile be occupied during the sessions of Congress as an exhibition room for the works of artists generally; and the extent and general usefulness of such an exhibit might probably be increased if an arrangement could be effected with the Academy of Design, the Arts Union, the Artists' Fund Society, and other associations of similar character, so as to concentrate at the metropolis for a certain portion of each winter the best results of talent in the fine arts."

The important points in the foregoing report are (1) that it was the opinion of the Regents that a museum was requisite under the law, Congress having left no discretion in the matter; (2) that ethnology and anthropology, though not specially named, were yet as important subjects as natural history; (3) that the history of the progress of useful inventions and the collection of the raw materials and products of the manufactures and arts should also be provided for; (4) for the gallery of art the committee had models in existence, and they proposed, pending the gathering of art collections, which would of necessity be slow, to provide for loan exhibitions by cooperating with art academies and societies.

In the resolutions which were adopted upon the presentation of the report, a museum was mentioned as "one of the principal modes of executing the act and trust."[1] The work was to go forward as the funds permitted, and, as is well known, the maintenance of the Museum and the library was long ago assumed by Congress, the Institution taking upon itself only so much of the necessary responsi-

[1] *Resolved*, That it is the intention of the act of Congress establishing the Institution, and in accordance with the design of Mr. Smithson, as expressed in his will, that one of the principal modes of executing the act and the trust is the accumulation of collections of specimens and objects of natural history and of elegant art, and the gradual formation of a library of valuable works pertaining to all departments of human knowledge, to the end that a copious storehouse of materials of science, literature, and art may be provided which shall excite and diffuse the love of learning among men, and shall assist the original investigations and efforts of those who may devote themselves to the pursuit of any branch of knowledge.

bility for the administration of these and subsequent additions to its activities as would weld them into a compact whole, which together form a unique and notable agency for the increase and diffusion of knowledge, for the direction of research, for cooperation with departments of the Government and with universities and scientific societies in America, and likewise afford a definite correspondent to all scientific institutions and men abroad who seek interchange of views or knowledge with men of science in the United States.

Since that early day the only material change in the scope of the Government Museum has been the addition of a department of American history, intended to illustrate by an appropriate assemblage of objects the lives of distinguished personages, important events, and the domestic life of the country from the colonial period to the present time.

The development of the Museum has been greatest in those subjects which the conditions of the past 64 years have made most fruitful—the natural history, geology, ethnology, and archeology of the United States, supplemented by many collections from other countries. The opportunities for acquisition in these directions have been mainly brought about through the activities of the scientific and economic surveys of the Government, many of which are the direct outgrowths of earlier explorations, stimulated or directed by the Smithsonian Institution. The Centennial Exhibition of 1876 afforded the first opportunity for establishing a department of the industrial arts, of which the fullest advantage was taken, but the department or gallery of the fine arts made little progress, though not from lack of desire or appreciation, until nine years ago, when circumstances led to its definite recognition.

While it is the primary duty of a museum to preserve the objects confided to its care, as it is that of a library to preserve its books and manuscripts, yet the importance of public collections rests not upon the mere basis of custodianship nor upon the number of specimens assembled and their money value, but upon the use to which they are put. Judged by this standard, the National Museum may claim to have reached a high state of efficiency. From an educational point of view it is of great value to those persons who are so fortunate as to reside in Washington or who are able to visit the Nation's capital. In its well-designed cases, in which every detail of structure, appointment, and color is considered, a selection of representative objects is placed on view to the public, all being carefully labeled individually and in groups. The child as well as the adult has been provided for and the kindergarten pupil and the high-school scholar can be seen here supplementing their class-room games or studies. Under authority from Congress the small colleges and higher grades of schools and academies throughout the land, especially in places

where museums do not exist, are also being aided in their educational work by sets of duplicate specimens, selected and labeled to meet the needs of both teachers and pupils.

Nor has the elementary or even the higher education been by any means the sole gainer from the work of the Museum. To advance knowledge, to gradually extend the boundaries of learning, has been one of the great tasks to which the Museum, in consonance with the spirit of the Institution, has set itself from the first. Its staff, though chiefly engaged in the duties incident to the care, classification, and labeling of collections in order that they may be accessible to the public and to students, has yet in these operations made important discoveries in every department of the Museum's activities, which have in turn been communicated to other scholars through its numerous publications. But the collections have not been held for the study of the staff nor for the scientific advancement of those belonging to the establishment. Most freely have they been put at the disposal of investigators connected with other institutions, without whose help the record of scientific progress based upon the material in the Museum would have been greatly curtailed. When it is possible to so arrange, the investigator comes to Washington; otherwise such collections as he needs are sent to him, whether he resides in this country or abroad. In this manner practically every prominent specialist throughout the world interested in the subjects here well represented has had some use of the collections and thereby the National Museum has come to be recognized as a conspicuous factor in the advancement of knowledge wherever civilization has a foothold.

SUMMARY OF THE DEVELOPMENT OF THE MUSEUM AND OF RECENT ACTIVITIES.

The national collections originated in the extremely rich and varied series of specimens obtained during the four years' cruise of the United States Exploring Expedition, from 1838 to 1842, which, with many other objects, were exhibited in the great hall of the Patent Office for nearly two decades. In 1850 the Smithsonian Institution commenced to assemble material for investigation, inaugurating and cooperating in explorations for this purpose, chiefly in connection with Government surveys, but it was not until 1858 that the two collections were brought together under the perpetual custody of the Institution, in accordance with the terms of its foundation. The Smithsonian building had only recently been completed, which was partly responsible for this delay, and in this structure the main hall was allotted to the display of specimens, the basement furnishing quarters for laboratories and for the storage of study series. At the end of 20 years, however, practically the entire building with the exception of its eastern wing had not only passed to the use of the Museum but had become greatly overcrowded. Up to this time the collections had related almost wholly to natural history and anthropology.

The first of the buildings erected for purely museum purposes, a necessity forced upon the Government by the extensive donations received at the Centennial Exhibition of 1876, was made ready for occupation in 1881. The nature of the collections afforded by this Exhibition, and of others elsewhere obtained, rendered possible the organization of several divisions of the industrial arts, as already intimated and as designed by the first board of regents, to which was added a department of American history. The development of these branches was soon largely checked, however, and some of the more important were temporarily abandoned, because of the overflow of natural history and anthropological material from the Smithsonian building.

Nearly 30 years more elapsed before relief was again secured through the building of the superb granite structure on the northern side of the Mall. Designed for the departments of biology, geology, and anthropology, and wholly required for their collections and activities, it has still been necessary to provisionally assign a certain amount of space to other purposes, as, for instance, to the National Gallery of Art. Among other advantages, this newest building is so

arranged as to bring the public into closer relations with the objects of the Museum and to give greater popularity to its rich stores, through a more effective installation of its exhibits, and through the accommodations afforded for displaying loan collections and for meetings and lectures.

Already filling to the extreme limit the area that can be granted it, the National Gallery of Art is greatly in need of an appropriate and adequate home, and, unless this be shortly provided it may be expected that benefactors will cease to regard it with favor, as some have in the past, because of inability to take care of extensive collections. In view of one of the very first mandates of the fundamental act, that ample provision be made for a gallery of art, it is hoped that a satisfactory solution of this problem may soon be reached. While on this subject it is pleasing to note that Mr. Charles L. Freer has made progress with his plans for housing at his expense the rich collection of American and oriental art of which he has made a present to the people of the United States. This structure, to be of white marble and belong to the cluster of Museum buildings, is designed solely for the above purpose, however, and will afford no accommodations for other parts of the Gallery.

With the broad subject of natural history provided for in the granite building, the two other buildings become wholly available for the arts and industries, with a single exception. The division of plants, including the National Herbarium, has been given possession of the upper story of the main section of the Smithsonian building, a hall 200 feet long by 50 feet wide, with some connecting rooms. This important branch has thus far been well accommodated in these quarters, but it is not expected to be so for long, as the collections are growing rapidly and the work is of great economic importance, especially in its relations to the Department of Agriculture, of whose botanical materials it is the custodian. In other countries the national herbarium is given great prominence, yet nowhere else is its significance as great as in this country.

On the ground floor of the Smithsonian building are three principal subdivisions of space, the great main hall, the western hall and the connecting range. All of these have been assigned to the exhibition of the graphic arts, but owing to the renovation of the main hall, still in progress, the collections relating to this subject have been placed in some disorder. Under this heading are included not only the higher grades of engraving, printing and binding, but also all processes of reproduction down to the methods of rapid illustration resorted to by the newspapers of to-day.

It is in the older Museum building that interest in the matter of new exhibits chiefly centers, though no subjects have yet been intro-

duced that were not recognized in the classification of 1881, or to some extent represented in the public displays of 25 to 30 years ago. Most prominent and most popular is the historical collection to which access is first gained from the main entrance. The memorial section, which occupies two halls, has been steadily increasing in importance and comprehensiveness for a long period. A recent addition has been a section of historical costumes, and also now for the first time have the extensive series of coins, medals and postal tokens been fully installed.

While consisting mainly of loans, the exquisite assemblage of laces and other art textiles has come to be regarded as a permanent feature, and, in fact, it contains possessions of the Museum, especially in laces, of considerable variety and value. In what is called the ceramic gallery is displayed a large quantity of pottery, together with glassware, ivories, bronzes, lacquers, etc., which, while unworthy as a whole for a national museum, comprises some choice pieces and in some directions is comprehensive though not wholly representative. Adjoining is the exhibition of medicines, magic, psychic, and aboriginal, as well as those recognized in modern pharmacology, forming an interesting object lesson for the public, though more important is the reserve collection of thoroughly identified drugs and drug plants of the world. Also installed in this building is the general and varied collection of musical instruments, and the unrivaled representation of the history of photography, in which the appliances and results of all periods are fully and well shown. Close by is another collection which is probably unsurpassed in this country—a remarkably rich assemblage of the objects of religious ceremonial, of wide range in its illustration and of great educational value.

When, in the temporary dismantlement of many of the industrial branches over 20 years ago, it became necessary to place vast quantities of material in storage, certain classes of objects were allowed to remain, being administered under the head of mechanical technology. The collections of this division have grown to a remarkable extent, and in some directions with such systematic effort as to result in historical series of inestimable importance. In other directions, however, through lack of means, it has been impossible to make any appreciable advancement, and for the same reasons and because of inadequate space it has been equally impossible to display or otherwise utilize all of this rather heterogeneous combination to the fullest advantage of the public. In electricity there is a very extensive representation of the history of the telegraph, including the oceanic cables, of the telephone, of the phonograph, etc., including hundreds of pieces of original experimental apparatus and of appliances that were actually employed at the very beginnings and at subsequent periods of these several lines of notable achievement. In small fire-

arms the collection is the most complete in this country. Among measuring devices, watch movements are especially to be noted. Land transportation is illustrated from the primitive forms, mostly shown by models, to the highly specialized methods of the present time, noteworthy features of the series being the first locomotive brought to this country, the application of electricity, and the invention of the gasoline automobile, of which the Museum possesses the first machine. The earliest successful experiments with the aerodrome are most effectively represented by examples of the Langley model forms which made actual flights, and by the first aeroplane purchased and used by any government. In marine navigation the primitive and early stages are well shown, as are also the beginnings of the use of steam and the development of sailing craft in this country down to a period of some 30 years ago. But the above fails to give anything like an adequate idea of the variety of invention in all the various fields covered by human ingenuity which are demonstrated by the collections of the division.

Among the recently reorganized divisions are those of textiles and mineral technology, which are being built up on entirely new lines. For the former much of the material which had been in storage was found to be not only still presentable, but also of much historical significance. For the latter there was practically nothing from the old collections that could be used. Under the division of textiles have likewise been included, whether temporarily or permanently future circumstances will determine, several of the most important of the world's industries, having more or less close relations with the main subject from the nature of the substances involved, consisting of such animal and vegetable products as are not specifically assignable elsewhere in the Museum classification. Wood technology is one of these, offering a very wide field for educational presentation. Foodstuffs, which result from and give rise to the greatest of all industries, form another, and after these come miscellaneous products, such as skins, furs, feathers, ivory and bone, pearl and sponges, in endless number and variety. In the first of these divisions attention has thus far been almost wholly directed to the development of the textile collections which are already very rich in manufactured, and to some extent in hand made, products in every line and in every character of fiber, both native and foreign. It is the purpose to show the origin of the natural products, as the making of the silk cocoon, the growth of cotton and the taking of wool from the sheep, and thence to demonstrate each step in the process of spinning, weaving, coloring and decorating down to the finished fabric, and even to the garment ready for wear and utilization in other ways. Besides samples of standard goods and of every class of

novelties, there are being introduced into the collections machinery and appliances both of historic interest and of modern invention to illustrate the methods of manufacture, some of the latter being adapted for operation in public view, this being especially the case at present in regard to cotton, in which the processes can actually be carried on from the gin to the loom. While the subject of textiles has been mainly promoted with reference to popular education, the division is accumulating a reserve series which in time will be of much service to manufacturers, as detailing the successive steps in the methods and results of production for a considerable term of years.

The section of wood technology was only organized near the close of last year. Though comprehended in the former division of forestry, very little material of public or even technical interest had been assembled. The action which the Museum is now taking toward bringing this subject to the front has been strongly advocated by the leading industrial journals for some years and has the support of prominent producers and users of wood throughout the country. The development of the collection will extend to all features of practical significance pertaining to the industry. The first principal step is in the direction of securing a representation of all kinds of woods obtainable in this country and abroad that are useful for any purpose from the most humble to the most refined, the same to be surface finished in the several ways appropriate to each. It is promised that the current year will show marked progress with the series. Besides these samples, there are to be gathered illustrations of the various purposes to which wood is put, its miscellaneous products and extracts, manufacturing processes, etc., which, together with the records that should accompany such a collection, will make the section of wide practical utility.

With regard to miscellaneous animal and vegetable products very little progress has been made beyond installing such of the former collections as were found in good condition, though in a few subjects some important materials have been added. The old collection of foods had so deteriorated in storage that only a small part can be used, except in the matter of Indian foods, which could not be replaced, and which are, fortunately, mainly preserved.

In mineral technology, the former collection of metallurgical products has given place to an entirely new scheme of presentation of the great industries which are covered by this division. The minerals and ores in all their varieties are included in the department of geology in the new building and are not duplicated here except where necessary to specifically illustrate an industrial process or feature. It is the aim of the division, whose collections will be mainly on exhibition, to illustrate the manner of occurrence of all minerals of

economic importance, the methods of mining or extraction from the ground, the processes of manufacture and refining, and the finished products, including the by-products. As will be realized, this plan must chiefly be carried out by means of models, occupying the bulk of the exhibition space and constituting a series of features so striking and so replete with novelties as to furnish a most effective object lesson not only for the casual visitor but for the student and expert as well. The installations so far made indicate the great possibilities of the future in teaching, as clearly and truthfully as is possible within the limited compass of a museum, the varied activities attendant upon the preparation of mineral substances for the use of man. The main details of the entire plan were outlined in advance, and though only started within a short time, the work has gone forward so rapidly that a large number of the prominent exhibits are already completed and placed. These have served to so arouse the interest and secure the aid of mining and manufacturing companies that still greater progress may be expected hereafter.

Besides the collections, the division is assembling the information necessary for the preparation of descriptive accounts of the several mineral industries, which cannot fail to be of great service in technological teaching.

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OPERATIONS OF THE YEAR.

APPROPRIATIONS.

The items of appropriation for the maintenance and operations of the National Museum for the year covered by this report, namely, from July 1, 1914, to June 30, 1915, contained in the sundry civil act approved August 1, 1914, were as follows:

Preservation of collections	$300,000
Furniture and fixtures	25,000
Heating and lighting	46,000
Building repairs	10,000
Purchase of books	2,000
Postage	500
Printing and binding	37,500
Total	421,000

BUILDINGS AND EQUIPMENT.

As explained in previous reports, both the roofs and skylights on the new building developed serious and extensive defects which were first observed at an early date, and much work has been done from time to time toward remedying these conditions. During last year it was necessary to refasten 4,018 lineal feet and to replace with new material 116 feet of the copper roofing. Following an experiment made the previous year, one entire side of the large skylight over the north wing was remodeled, and, it is thought, in a manner that will prove satisfactory. The original construction was so faulty and inadequate, however, as to require the substitution of new cross and condensation gutters, new copper cap and glass rests, heavier lead washers under the nuts of the bolts, and thicker strips of lead between the glass and the ribs. The section attended to represents only one-sixth of the skylight area, all of which should receive the same treatment. The exterior of the metal frames of all the large windows in the first and second stories of the new building were given a coat of aluminum paint.

In the older Museum building about 4,000 square feet of unprotected ceiling, mainly in the courts, were covered with beaded sheet metal, the same as has been used elsewhere, to prevent the falling of old and decomposed plaster. The terra cotta and marble floors in the rotunda and main halls, which had become badly worn and broken, were extensively repaired, requiring the replacing of about 1,000 of

the tiles and marble slabs. There was much to do in the pointing up and painting of walls and ceilings, and the tin roofs over the various sections of the building were treated with flexible metallic paint. The old cement water table along the western side of the building was replaced with granolithic pavement for half its length.

The principal repairs in the Smithsonian building under the regular appropriation consisted in the replacing of certain badly rotted or wornout floors in the basement and in the second story of the main structure. More extensive and important repairs and alterations, however, were carried on under specific appropriations, one having reference solely to the exterior, the other to the interior of the building. Under the first, the stone walls were thoroughly pointed up with cement mortar, the original lime mortar used 65 years ago having lost its strength, and in many places having been entirely washed out between the stones; loose stones, which occurred abundantly in the battlements, were reset, broken ones being replaced; the roofs at the east end of the building and on several of the towers were repaired or replaced, and new finials of aluminum were provided for three of the latter; a large number of windows were repaired or rebuilt; the areaways were repaired and most of the entrance steps were reset; and a granolithic water table was laid along the north and west sides of the building where the foundations were not protected by areaway constructions. The above repairs were very necessary to the preservation of the Smithsonian building, of which the exterior masonry and the windows have given much concern for a long time. Sections of this building were completed in succession between 1848 and 1855, since which latter date the exterior walls, except to a limited extent, have never received any serious attention. Following the great fire of 1865 the walls of the main section of the building were carefully scrutinized and were in part reinforced, but evidences of the ravages of the fire have been plainly apparent until now.

The other changes in the Smithsonian building specifically authorized by Congress have been in progress during two years and will not be completed until some time in the current year. They relate entirely to the main hall, which was fitted up under an act of Congress for the first exhibitions by the National Museum in 1857 and 1858, since which time there had been no essential alteration in the arrangements. The room was originally provided with a gallery and with series of cases on the two floors thus formed, both of which were instrumental in cutting off a large part of the light from the middle portion of the room. The upper exhibition cases were removed some years ago, but without a very measurable effect. In accordance with the plans now being carried out, the galleries have been entirely removed, as have also all fixed exhibition cases. Steel book stacks

have been erected at each end, extending to the ceiling and encroaching upon the floor space to an extent of 59 feet. Steel bookcases also occupy the wall space on both sides of the remaining area, but there is left a grand hall 141 feet long by 50 feet wide, broken only by the two longitudinal rows of large piers joined by arches above. The nave and aisles thus formed will be available for Museum exhibits as heretofore, though not to the same extent.

As has been customary for several years, the steam and power plant was shut down during the months of July and August to permit of the uninterrupted repair and cleaning of the plant, the electric current required during that period being supplied by one of the local power companies at the low rate of 2½ cents per kilowatt hour. The repairs called for were mostly unimportant, but considerable changes were made in the steam connections with the older buildings. By the introduction of a reducing and other valves the steam pressure in those buildings has been reduced from 100 to 60 pounds, resulting in an appreciable saving in the amount of steam consumed, and permitting the keeping on of steam in those buildings continuously throughout the cold weather. This latter advantage has made it possible to eliminate a considerable proportion of the radiators in the older Museum building, while in the Smithsonian building the radiator system in the main hall was entirely changed to accommodate it to the other alterations there in progress. Improvements were also made in the heating conduits to the older and outlying buildings. The total amount of coal used for both heating and electric generating purposes was 2,989 tons.

It is gratifying to note a considerable reduction in the cost of producing electric current during the year, which was at the rate of 2.4208 cents per kilowatt hour, as compared with 2.736 cents the previous year. This was owing to the lower price of coal and to a more uniform electric load. The ice plant also continued to work satisfactorily and economically, 302 tons of ice having been produced at a total expense of $716.21, or at the rate of $2.37 a ton. The fire apparatus was maintained in good condition, and additional extinguishers were provided for the older buildings. The ventilation of the public toilet rooms in the basement of the Smithsonian building having been noticeably imperfect, new ducts were constructed, connected with the old smoke flue from the furnace, and a fan for producing forced draft was introduced, which will greatly improve the conditions. The motors attached to the large ventilating fans in the attic of the new building have given such constant trouble that steps were under way at the close of the year to replace them with others of an improved pattern. Many minor changes and improvements were made in connection with the plumbing, especially in the matter of furnishing hot water for the comfort

rooms and domestic purposes during the period when the heating boilers are not in operation. Sanitary fountains similar to those placed some time ago in the new building, but of a somewhat simpler design, were installed in the older buildings, and the use of drinking cups by visitors has been discontinued.

The principal articles of furniture acquired during the year consisted of 18 exhibition cases, 193 storage cases and pieces of laboratory furniture, 58 pieces of office and miscellaneous furniture, 2,158 wooden unit drawers, 500 insect drawers and 508 drawers of special construction. These were partly obtained by contract and partly built in the Museum shops. A very important part of the work, mostly done in the Museum shop, consisted in the remodeling of old cases, especially for the art-industrial collections. Repair work was also extensive, as was the construction of exhibition bases and of furnishings and fittings for the interior of cases. A number of articles were condemned and disposed of as of no further use or value, among these having been the exhibition cases erected in 1857 in the main hall of the Smithsonian building, as before mentioned. An inventory of the principal furniture on hand at the close of the year shows 3,483 exhibition cases, 7,018 storage cases and pieces of laboratory furniture, 3,414 pieces of office and miscellaneous furniture, 42,214 unit specimen drawers of wood, 4,712 unit specimen drawers of steel, 8,939 insect drawers, and 17,902 miscellaneous specimen drawers and boxes of various kinds.

COLLECTIONS.

The additions to the collections, received in 1,481 accessions, aggregated approximately 304,647 specimens, not including loans. These specimens were apportioned among the several branches of the Museum to which they pertained as follows: Anthropology, 15,140; zoology, 101,928; botany, 51,295; geology and mineralogy, 4,063; paleontology, 129,981; textiles and animal and vegetable products, 1,511; mineral technology, 607; National Gallery of Art, 122. The divisions most favored by increases in point of numbers were paleontology, with nearly 130,000 specimens; marine invertebrates, with over 70,000 specimens; and plants, with over 51,000 specimens; but in other subjects the additions were also large and valuable, the philatelic collection having been enriched by 8,508 stamps, stamped envelopes and postal cards. The loans totaled 1,760 objects, of which 125 consisted of paintings and sculptures for the National Gallery of Art; 200, of laces, embroideries, tapestries, etc., for the art textile collection; and 176, of articles for the historical costume collection; the remainder having been accepted for exhibition mainly in the divisions of history, ethnology, the graphic arts and ceramics.

The number of separate lots of material received for examination and report amounted to 790, of which about 64 per cent were geological and 28 per cent biological.

DEPARTMENT OF ANTHROPOLOGY.

Ethnology.—Thirty-nine accessions, comprising 1,457 specimens, constituted the additions to this division. Gifts were more numerous than usual, the more important ones being the following: From the Misses Elizabeth L., Mary and Grace Lyon, of Baltimore, Md., 641 examples of Japanese art assembled about 30 years ago by the late J. Crawford Lyon, and consisting of helmets, helmet crests and face pieces, stirrups, spears, staffs, sword guards and ornaments, knife handles, etc.; from Dr. W. L. Abbott, a series of baskets, bark cloth, sword hilts in process of making, quivers for blowgun darts, musical instruments, and other objects, collected in Dutch Borneo by Mr. H. C. Raven; from Mr. Herbert E. Winlock, of the Metropolitan Museum of Art, examples of modern Egyptian clothing collected by the donor; and from Mrs. Estelle Palmer, of Chicago, Ill., a collection of objects from the Plains Indians, including an historical painting on elk skin, a curious old saddle, bow, arrow, knives, ornaments, etc., which had belonged to the late Maj. George Henry Palmer, U. S. Army. An important addition, obtained by purchase, consists of musical instruments, household articles, tools and other objects from the Ute Indians of the Uintah and Ouray Reservation, southeastern Utah, which are especially valuable on account of the care with which they were brought together.

The principal loans comprised ornaments, costumes, pouches, baskets, a chicken trap, a two-headed drum and a variety of weapons, from the Bagobo tribe of southern Mindanao, P. I., received from Miss Elizabeth H. and Miss Sarah S. Metcalf, of Worcester, Mass.; ethnological objects from Abyssinia, consisting of a number of royal presents given to the lender during his stay at the Court of Menelek, such as spears, silver overlaid shields, a dagger, basket, ornaments, etc., received from Mr. Hoffman Philip; and a large series of ethnological and historical material, besides objects of art, from Japan, China, Egypt and Europe, received from Mrs. Allan McLane, of Washington.

The most important work of the year was the preparation of exhibits for the Panama-Pacific Exposition at San Francisco, all of which will be returned to the Museum. The principal features are four family lay-figure groups, corresponding in type to those now exhibited in the Museum, and representing the Carib Indians of British Guiana, the Dyaks of Borneo, the Zulu-Kaffirs of South Africa and the western Eskimo. Accompanying them are ten village groups,

four illustrative of the tribes mentioned and the others of the Iroquois, the Navaho, the Seminoles, the Chippewa, the Samoans and the Hawaiians. In addition to these, there are a large number of aboriginal objects and several synoptic series designed to represent the development of the knife, the saw, the European and American ax, the spindle, the shuttle and fire-making apparatus. Fifty-two lantern slides of Museum exhibits in the department of anthropology were also made for use in a stereomotorgraph.

Investigations relative to the material culture of the Hopi as exemplified in the collections were conducted by the curator of the division, Dr. Walter Hough. This work is an elaboration of the catalogues of the late James Stevenson, extended by the subsequent information acquired by the curator both in museum and field research. He also made a special study of the effect of the discovery of fire-making methods on the early distribution of man, the results of which have been prepared for publication. Dr. Gudmud Hatt, of Copenhagen, made a study of the arctic clothing in the collection. Other distinguished ethnologists from abroad who visited the Museum were Dr. R. R. Marett, Dr. W. H. R. Rivers, Mr. E. Sidney Hartland and Miss Adele Breton, of England; and Dr. F. von Luschan, of Berlin, Germany.

American archeology.—The most noteworthy accession of the year was a large collection of American archeological specimens, obtained in exchange from the Panama-California Exposition, consisting of implements and other objects of stone, hematite and copper from various localities in the United States, and specimens of obsidian, copper and terra cotta from Mexico. Among the more important items are a series of the large chipped blades of chert (agricultural implements) from the Ohio and Mississippi valleys, including both oval and notched types and many showing the high polish due to long continued use; chipped disks, thin leaf-shaped blades, spearheads, arrowpoints, drills, scrapers, etc., mainly from the western States although the eastern and southern States are also represented; a cache of 44 rhyolite blades from North Carolina; large polished stone celts or hatchets from Illinois, discoidal stones from Illinois and Tennessee, a bannerstone from Missouri, and a drilled amulet from Tennessee. Many specimens from the United States and Mexico were likewise received in exchange from the Naturhistoriska Riksmuseum, Stockholm, Sweden. Those from the United States consisted of large stone celts, grooved axes and adzes, bannerstones, discoidal stones, hematite axes and celts, large chert blades, oval and notched agricultural implements, spearheads, arrowpoints, scrapers, stone pestles, etc.; while those from Mexico comprised stone celts, carved stone pendants, blades, scrapers, etc., of obsidian and flint, terra cotta molds, stamps, and spindle whorls.

A collection from the Lower Mimbres Valley, N. Mex., transferred by the Bureau of American Ethnology, contains a quantity of pottery displaying a distinct type of decoration and therefore constituting a valuable addition. A bannerstone of rose quartz, a very remarkable Indian relic and probably one of the finest examples of its kind yet brought to light, found on the farm of Mr. W. E. Trice, Woodruff County, Ark., was obtained by purchase, as were three metal objects, one of gold and two of gilded copper, from Chiriqui, Province of Panama, the first a bird image, the other two consisting of two figures connected by wire scroll work and a winged figure also with wire scroll work. There were two principal gifts. The first consisted of a remarkable jade ax, one of the largest pieces of worked jade so far received by the Museum, from Alta Verapaz, Guatemala, a small stone celt from Ahuachapan, San Salvador, and a clay figurine from Tepecoyo, in the same country, presented by Mr. Emilio Mosonyi, of San Salvador. The other was a large pottery vase from a mound in Marion County, Tenn., donated by Mr. Clarence B. Moore, of Philadelphia, Pa.

The condition of the display and study collections was much improved. A number of new acquisitions and many specimens selected from the reserve series were added to the exhibition series and several new cases were installed. Three groups illustrating aboriginal quarry and mining methods, namely, a soapstone quarry group, an iron-paint mining group, and a copper mining group, were completed. They are shown in large floor cases and not only make an attractive display but are of much educational value.

The head curator, Mr. William H. Holmes, who retains personal charge of the American archeological collections, continued his study of the stone implements, with the view of embodying the results in the Handbook of American Antiquities in preparation for publication by the Bureau of American Ethnology.

Old World archeology.—Of 8 accessions, the most important were an exchange and a gift. The former, from Dr. A. Rutot, of the Royal Museum of Natural History at Brussels, consisted of 90 Neolithic stone implements from Belgium, representing the first epoch of polished stone culture in Europe, known as the "Spiennian," and serving to round out the prehistoric series from that country. The latter, from Mr. Herbert E. Clark, of Jerusalem, was composed of 19 stone implements, hand axes of the Acheulean type, chisels, etc., forming a valuable addition to the present collection from Palestine.

The routine work consisted mainly in perfecting the exhibition collections and preparing labels. The latter included especially a series descriptive of the various groups which, with the aid of the exhibits, serves to convey to the visitor a good idea of the character

and state of advancement of the several phases of prehistoric culture from the known beginnings down to the beginning of the Iron Age in the Lake-dwelling and Terramare periods. The prehistoric remains from Italy were installed and labeled. On a screen placed in the north court were mounted, on one side, the drawing of the mosaic map of Palestine, and, on the other, the Canopus Stone and two other Egyptian reliefs, representing ancient Egyptian sledges and boats and the human figures working them. The classification of the prehistoric reserve material and its arrangement in storage bases, begun the previous year, was completed.

Aside from the studies required for the appropriate recording and labeling of material, a descriptive account of the colored drawing of the ancient Medeba mosaic map of Palestine was prepared for publication by the assistant curator in charge of the division, Dr. I. M. Casanowicz.

Physical anthropology.—Skeletal material from a Minsi burial place on the Jersey side of the Delaware River opposite Minnisink Island, three miles below Montague, N. J., constituted one of the most complete and carefully recorded collections of such specimens so far acquired by the division. It was received as a gift from Mr. George G. Heye, of New York. Similar material from Alabama and Tennessee was contributed by Mr. Clarence B. Moore, of Philadelphia, Pa.; 8 prehistoric skeletons and 4 skulls from Bohemia were obtained from Prof. J. Matiegka, of the University of Prague; and 3 nearly complete and 4 partial human skeletons were collected in Montana by Mr. C. W. Gilmore, of the Museum staff. Dr. Aleš Hrdlička, curator, assembled 250 samples of hair from representatives of old American families and others; and Prof. R. R. Bean, of the Medical School of Tulane University, presented a large number of anatomical specimens.

The collections of the division are in excellent condition with respect both to preservation and accessibility, the reserve material, appropriately arranged in storage drawers, being reasonably safe from dust and deterioration. Much advance was made in the repair, cataloguing and study of the older collections. Twelve exhibition cases placed in the hallway of the third floor were installed with Indian busts and with series of specimens relating to early man, to development and variation in the brain and in the principal long bones, to variation in human hair, and to prehistoric American surgery of the skull.

During the early part of the year the curator gave largely of his time toward completing an anthropological exhibit for the Panama-California Exposition at San Diego, Cal., funds for which were provided by the exposition. His principal researches related to the valuable collection of skeletal material from New Jersey, presented by

Mr. George G. Heye, with which considerable progress was made; and to "Old Americans," or American families of at least three generations in this country, the latter being in continuation of work previously begun. One hundred males and the same number of females have been studied and a résumé of the results, intended for presentation at the forthcoming International Congress of Americanists, is in course of preparation.

Dr. Hrdlička was in San Diego, Cal., from November 18th to January 18th, installing the anthropological exhibits at the exposition, and he also lectured on subjects connected with his division in several western cities. Later in the year he visited a number of museums for the purpose of examining skeletal remains of eastern Indians, and made a trip to the White Earth and Leech Lake reservations in Minnesota for the Department of Justice, with the object of determining the proportion of pure and mixed bloods among the Chippewa Indians.

Mechanical technology.—The additions of the year, comprised in 40 accessions, included many articles of exceptional value. Of greatest interest was a collection of 280 pieces of experimental phonographic apparatus, and several relics connected with the early history of the telephone, the gift of Dr. Alexander Graham Bell. Among the other noteworthy acquisitions were many surveying instruments and 7 pocket chronometers of historical importance, transferred by the U. S. Coast and Geodetic Survey; 23 guns and 1 sword deposited by the Navy Department; 1 United States magazine rifle, deposited by the War Department; an equatorial sextant and solar compass presented by Miss Elizabeth B. Burt, of Washington; a sundial calculated for Valencia, Spain, the gift of Mr. Claude L. Woolley, of Baltimore, Md.; a gasoline automobile of date 1896, contributed by the Olds Motor Works, of Lansing, Mich.; a comptometer presented by the Felt and Tarrant Manufacturing Co., of Chicago, Ill.; a talking machine donated by the American Graphophone Company, of Bridgeport, Conn.; and 6 target rifles lent by the National Rifle Association of America.

Good progress was made toward perfecting the installation of the exhibition collections, in connection with which it was necessary to bring more recent acquisitions into proper relationship with earlier ones, and as a whole a more systematic arrangement of the material has been secured. Important readjustments were effected in the collections of telephone apparatus, talking machines, watches, railroad apparatus and firearms. Gratifying progress was also made in the labeling of exhibits and in collecting data required in perfecting the records.

Investigations relating to the various subjects coming within the scope of the division, by the curator, Mr. George C. Maynard, re-

sulted not only in securing many interesting specimens for the Museum but also in obtaining information regarding the existence of others which are especially desirable.

Musical instruments.—Last year was a signally propitious one for the section of musical instruments, which received from a single source, as described below, a much more extensive and far richer addition to its collection than ever before. The other accessions comprised a reed hand organ and a pianola with six music rolls, the gift of Mrs. Julian James, of Washington; a musical instrument, supposed to be Javanese, contributed by Mrs. John Crosby Brown, of New York; three violins used by G. Napoleone Carozzi, donated in his name by his widow, Mrs. Mary W. Carozzi, of Portland, Oreg.; and an old Maya drum, called Sacatan, presented by Mr. Arthur P. Rice, of Brookline, Mass.

The important contribution first referred to was a gift from Mr. Hugo Worch, of Washington, of a large series of antique pianos of both foreign and American make, including a number of examples manufactured during the latter part of the 18th century. It was about 25 years ago that Mr. Worch began the assembling of these instruments, with the view of preparing a history of the American pianoforte; and in order to secure to the public the permanent preservation of these valuable objects, which have been gathered without regard to time or expense, he generously tendered to the Museum the entire collection or such part of it as could be accommodated. In the selection that is being made, special attention is paid to those items of native makers whose reputations are closely linked with the progress and development of the American pianoforte industry. They illustrate particularly the important steps that have been taken, with such intermediate gradations as seem most worthy of being represented. During the year the installation has been steadily progressing, the first gallery in the rotunda of the new building having been assigned to this purpose. Seventy instruments have already been definitely selected, though not all of these had been delivered at the close of the year. As Mr. Worch has desired to have the cabinet work of all restored as nearly as possible to its original condition, it will be realized that some time must elapse before the entire arrangement can be perfected; but nevertheless a large part of the selection will be kept on view, whether restored or not. While only a few of the instruments remain in a playing condition, the mechanical parts are all sufficiently well preserved to demonstrate their character and variations.

To the instruments themselves will be added several hundred photographs, showing every phase of the pianoforte industry prior to 1850, making the collection the largest and most unique of its kind.

By this generous and public-spirited gift, Mr. Worch has made himself one of the notable benefactors of the Museum, and especially in a line in which the Museum has been particularly deficient. The public can scarcely fail to realize the significance of his donation, not consisting of isolated objects, however valuable they might be, but of a definite and well-ordered collection, illustrating by actual examples the history of an industry dear to the hearts of all civilized peoples.

We must wait upon Mr. Worch for a detailed account of his studies and his collection. Below is given a list of the instruments referred to, of which 46 are American and 24 European. It has been prepared from a preliminary catalogue furnished by the donor, and while neither descriptive nor comparative, it contains a few remarks of general interest. The foreign pianos have been allowed to precede those of American make as they furnish earlier dates, but in most cases it has been impossible to fix the dates with absolute definiteness. The foreign instruments are from Germany, and from Vienna, Austria; London, England; and Paris, France. The American are from Philadelphia, New York City. Baltimore, Boston, Cincinnati, Norwich, Conn., and Concord, N. H.

The list is as follows:

Germany and Austria.—A German square piano, maker's name unknown, about 1770; the instrument, which is richly inlaid and in fine condition, is a rare specimen of its class of work. *L. H. Mueller*, Bremen, German hammer clavier, No. 83, about 1785; a good type of German squares made at that time. *Martin Seüffert*, Vienna, upright piano, about 1812; pianos of this type, because of their peculiar shape, were known as "Giraffe Grand"; the maker gives notice on the name plate that this instrument was invented by him. Harmonium of unknown German make, about 1825. *Andre Stein*, Vienna, square, about 1833; Viennese action, of which Johann Stein, father of Andre, was the inventor. The two most popular foreign instruments in this country from 1825 to 1840 were those of Stein of Vienna, and Rosenkranz of Leipzig. Stein's reputation in Europe was proverbial for the excellence of his work, and the importation of Stein instruments into the United States exceeded that of any other foreign make.

London, England.—*Longman & Broderip*, two examples, both square, one about 1785, the other, No. 424, finished in 1796, the former being one of the earliest types of this establishment which was founded by James Longman in 1767. *Lodiner*, square, about 1785; the name is doubtless fictitious. *Cr. Ganer*, square, No. 456, about 1788; an excellent example of one of London's pioneer piano makers. *Culliford, Rolfe & Barrow*, two square pianos, one about 1790, the other about 1795. *Robert & William Gray*, square, about 1795. *Johannes Broadwood*, square, finished in 1798. The style of

action shown by this instrument, mop stick with individual brass dampers for each key, was copied by both Albrecht and Taws of Philadelphia in their earlier pianos, and they were perhaps the only American makers to adopt this system of damping. *John Broadwood & Sons*, makers to His Majesty and the Princesses, square, No. 420, about 1805. *William Southwell*, square, about 1805. This maker was noted for his many innovations in piano construction. *Astor & Co.*, square, No. 3243, about 1805. This firm was founded by George Astor at the beginning of the 19th century, and also dealt in brass instruments. *Clementi & Co.*, square, about 1810. *Thomas Tomkison*, maker to His Royal Highness, the Prince of Wales, square, about 1810. *Wilkinson & Wornum*, upright, No. 17, about 1810; one of the first small English uprights made. *Robert Wornum*, upright, about 1816. Wornum was the first to introduce the small upright, named by him the "piccolo." He was one of England's leading inventors, and many ingenious devices attributed to him were adopted by both foreign and American piano manufacturers. *Dale, Cockerill & Co.*, upright, No. 455, about 1825. *Collard & Collard*, square, about 1835.

Paris, France.—*Erard Frères & Co.*, square, finished in 1799; a choice example by these famous piano makers. *A. C. Debain*, about 1848; player piano without a keyboard, being operated with a hand lever, and the music being made on short boards into which steel pins are driven.

Philadelphia, Pa.—*Charles Taws*, two square pianos, one about 1790, the other, No. 22, finished in 1793, the latter showing notable improvement in workmanship over the former; continued piano making until 1833. *Charles Albrecht*, two square pianos, the first, No. 21, about 1790, the other about 1792; best known of the pioneer instrument makers in this country, and the examples in this collection show superior skill; retired in 1824. *John Sellers*, square, about 1794. This instrument is perhaps the only American make containing the rudimental German action, all early piano makers of this country having copied the English models. There is a doubt as to whether this instrument was actually the work of John Sellers, as its primitive construction antecedes any known American make. *Harper & Fagan*, square, about 1798. *Thomas & John Loud*, square, No. 80, about 1818. The name stencil reads: "square and grand pianoforte manufacturers, from London." Unlike most other makes of that time, the case is substantially constructed. *Emelius N. Scherr*, square, No. 2, about 1825. Scherr made pianos until 1852, and his instruments were noted for their general good workmanship and durability. On some he added to his name: "Late Maker to their Majesties, the King and Princess of Denmark." *Conrad Meyer*, square, No. 240, about 1827. This maker is said to have been the

first who succeeded in casting a full iron frame, in 1832, though there has been some controversy regarding this fact. He received a second prize at the great London Exhibition of 1851. Meyer pianos were made as late as 1888, at 1717 Chestnut Street, the business having been continued by the two sons of Mr. Meyer. *Loud & Brothers*, square, No. 912, finished December 3, 1830. The Louds were the most reputed piano makers of Philadelphia. *D. B. Grove*, square, about 1830. *Alpheus Babcock*, square, No. 1517, made at William Swift's pianoforte factory, Philadelphia, about 1835. This is a creditable example of Babcock's superior skill. It contains the iron frame patented by him in 1825, and well illustrates the advantageous use of iron to resist the tension of the strings, which are all intact, and to prevent the twisting or warping of the woodwork.

New York City.—*John Geib & Son*, square, about 1800. John Geib was the head of this well known family of piano makers, which was connected with the piano business until 1870. *Waites & Charters*, square, about 1805. This was one of New York's pioneer firms, coming from London. *John Kearsing & Sons*, square, about 1808; one of the best preserved instruments of the early part of the 19th century. The Kearsing family was affiliated with the piano industry until 1857, and consisted of John, senior and junior, George and Thomas. *Samuel Neilson*, about 1815, built on square lines. *Robb & Mundy*, square, about 1824; a neat and well made instrument. *William Geib*, square, No. 6662, about 1825; an exquisite piece of workmanship. *Robert & William Nunns*, three examples, namely, square, about 1826; upright, No. 1223, about 1833; upright, No. 1444, about 1840. Considered among the leading manufacturers of their period, and received a second prize at the great London Exhibition of 1851, where they also exhibited a square piano with an overstrung scale. No. 1223 is one of the first small, or piccolo, uprights made by an American firm. *Dubois & Stodart*, square, No. 243, about 1830. *Joseph Kohnle*, upright, about 1858; action constructed on entirely new lines and every individual part wholly original. Kohnle advertised himself as a pianist in 1856–57, and as a piano maker in 1858. An instrument similar in appearance, made by Pape, Paris, in 1839, is exhibited at one of the museums in Copenhagen. *Carhart, Needham & Co.*, double-bank melodeon, No. 4407, about 1858.

Baltimore, Md.—*Walker*, square, about 1811. He was the second piano maker of Baltimore. *James Stewart*, two examples, both square, the earlier, No. 275, finished June 2, 1812, the later about 1814; also made organs and upright pianos. *Joseph Hisky*, two examples, both square, one, No. 53, about 1820, the other about 1828. Hisky, who advertised that he was a piano maker from Vienna, carried on this business in Baltimore from 1819 to 1845. *James Jen-*

kins, square, about 1825. *George Huppmann*, three examples, all square, with dates about 1829, 1832 and 1836. The last is one of the most ornate square pianos made in this country, and is in excellent condition. *Joseph Newman*, square, about 1829. *J. J. Wise & Brother*, two examples, a square piano, about 1838, and an upright, about 1840. This firm manufactured pianos in Baltimore for a period of over 30 years, and became known for its excellent instruments. *Anthony Kuhn*, square, about 1842. Not the work of Kuhn, but made in Austria for his trade, a common practice at that period. *J. & E. R. Newman*, square, about 1846.

Boston, Mass.—*John Osborne*, square, No. 307, about 1822. *Eben Goodrich*, square, about 1824. *Stewart & Chickering*, square, about 1824. James Stewart was considered the leading piano maker of Baltimore from 1812 to 1817, and also manufactured in Philadelphia previous to locating in Boston. *Alpheus Babcock*, two pianos, both square, about 1825 and 1828, respectively. The latter is a beautiful example of the handicraft of this highly reputed maker. The earlier square pianos of Babcock remain the most tastefully and neatly constructed of all these instruments.

Miscellaneous.—*A. Reuss*, Cincinnati, Ohio, square, about 1832; one of the most picturesque types of instruments of the larger form. Reuss announced himself as a piano maker from Vienna. *Walker's* patent swell seraphine, Norwich, Conn., about 1840. *Austin & Dearborn*, Concord, N. H., melodeon, piano style, about 1844.

Ceramics.—Forty-seven objects were received by this section, in 4 accessions, as follows: An old porcelain rice bowl with cover and a tea set of cloisonné on porcelain, lent by Miss Julia H. Chadwick, of Washington; a collection of Chinese and Japanese porcelains lent by Miss Eliza R. Scidmore, of Washington; a porcelain match box with bust of Benjamin Franklin surmounting the cover, presented by Mrs. Belle Bushnell, of Charlottesville, Va.; and an "ivy" pitcher lent by Mrs. F. W. Clarke, of Washington.

Graphic arts.—The accessions of the year, comprising 543 objects, exclusive of photography, were most important in the matter of filling gaps in the exhibition series. They were mainly as follows: Illustrations of the process employed in making blocks for color printing from photographs, presented by the Phototype Engraving Co., of Philadelphia, Pa.; a number of different kinds of printing ink, supplementing a previous contribution from Philip Ruxton, Inc., of St. Paul, Minn.; and many examples of lithographs, collotypes and other prints, as well as illustrations of the rapid rotary intaglio process, the gift of Mr. R. P. Tolman, of the Museum staff.

Special attention was given to the remounting of the exhibition collection and the arrangement and cataloguing of the reserve series.

The work of installation was, however, greatly retarded on account of the extensive alterations in progress on the main floor of the Smithsonian building in which this division is located.

In the section of photography, the additions consisted of two ruled screen color photographs, one made by Prof. Joly, the other by MacDonough, lent by Mr. Charles L. Brasseur, of Orange, N. J.; one MacDonough color transparency and four MacDonough color photographic prints, presented by Mr. Romyn Hitchcock, of Ithaca, N. Y.; an autographic No. 3 kodak, gift of the Eastman Kodak Co., of Rochester, N. Y.; and 6 flashlight photographs of the interior of the Franciscan Monastery at Brookland, D. C., taken and contributed by Miss L. Bernie Gallaher, of the Museum staff.

History.—This division was in receipt of 94 accessions, which, including postage stamps and coins, aggregated over 9,000 objects. The most interesting acquisitions of the nature of memorials came as loans, and were chiefly as follows: From Mr. E. Arnett Smith, of London, Ohio, a water color portrait of George Washington painted by James Peale about 1775 and mounted in the original frame. Washington is shown in Continental uniform with three-quarter view of the face turned to the left. From Mr. Jesse S. Walton, of Pensacola, Fla., a powder horn, leather bullet pouch, horn powder measure, and dagger with sheath, carried during the War of the Revolution by Capt. William Walton of the American army, great-grandfather of the lender. From Miss Laura Wolcott Tuckerman, of Edgewood, Md., a silver tea service of five pieces comprising two teapots, a coffee pot, a creamer and a bowl, which had belonged to Laura Wolcott, daughter of Oliver Wolcott, one of the signers of the Declaration of Independence. The design of the service is typical of the latter part of the 18th and the early part of the 19th centuries. From Mrs. Glenn Brown, of Washington, a pair of gold and jeweled earrings bearing the initial "M" and formerly owned by Mrs. Rebecca Madison, niece of President James Madison. From Rear Admiral Robert E. Peary, U. S. Navy, retired, three gold medals awarded him in recognition of his achievements as an Arctic explorer by the Geographical Society of Paris, the Explorers' Club of New York City and the Saint Andrews Society of Philadelphia, respectively, and a bronze Elisha Kent Kane medal presented to him by Mr. Harry B. Kane.

A collection of silver and bronze coins, including a number of fine specimens of United States one cent and two cent pieces issued between 1866 and 1880, and examples of Argentine, English, French, Spanish, Mexican and Korean coins, all of the 19th century, were presented by Dr. Walter Hough, of the Museum staff.

The total number of postage stamps, stamped envelopes and postal cards received for the collection from the Post Office Department and from other sources was 8,508.

Much progress was made in the installation of specimens, especially those recently received, and the work of arranging the smaller objects of the reserve series in alphabetical order by name of donor or lender, in accordance with the plan outlined in the last report, was nearly completed. This classification will greatly simplify the task of locating particular specimens when needed. The larger specimens have also been so disposed as to make them easily accessible. The chronological sequence of the exhibition cases and of the specimens in the cases was materially improved. The cases in the north hall and west-north range were partly rearranged and many of them were completely reinstalled. These changes have greatly increased the interest and value of the collections as a whole by rendering the general scheme of classification apparent to even the casual observer. The wall cases in the north hall now contain a noteworthy collection of historical furniture placed as far as possible in chronological order. The series begins with several chairs, a table, and a secretary or combination bureau and desk, formerly owned by Brig. Gen. Rufus Putnam of the Continental Army, followed by furniture which belonged to Thomas Jefferson, Lafayette, Alexander Hamilton, John Marshall, Peter Gansevoort, John Cropper, and other men of note in American history. The backs of these cases have been utilized for historical paintings and engravings. The renovation in a permanent manner of the Star-Spangled Banner was completed in accordance with the plan described in the last report, and the flag was restored to its former position in the wall case on the right of the entrance to the north hall. Much of the time of the assistant curator was devoted to preparing for exhibition the collection of ancient Greek and Roman coins which has for a number of years been in storage.

The preparation of the paper on the Washington relics by the assistant curator, Mr. T. T. Belote, now in course of publication, entailed a considerable amount of research work, which resulted in additional information that has been embodied in a new series of exhibition labels. This collection was also almost entirely reinstalled with a view to securing an arrangement harmonious with that followed in the catalogue. About 800 labels were printed for the various objects recently installed, and copy was prepared for about 2,500 additional labels, largely required for the coin and medal collection. At the close of the previous year the mounting and installation of the postage stamp collection in the exhibition cabinets, arranged by countries, had proceeded as far as the letter

N. During the past year the mounting of the entire collection was completed, and the 20th century part of the collection was installed as far as the letter P.

Historical costumes.—This collection was very considerably increased during the year, through the continued efforts of Mrs. Julian James and Mrs. R. G. Hoes, of Washington, 376 objects, comprised in 37 accessions, having been received. Most important was material for the representation, by means of draped figures, of four hostesses of the White House additional to those accounted for in the last report. The articles were all acquired as loans, and may be briefly described as follows:

For the administration of President Zachary Taylor, 1849–50, a costume worn at this period by Betty Taylor, daughter of the President, consisting of a dress, with kerchief, of sage-green silk grenadine, having a Scotch plaid border and trimmed with "moss" and silk fringe. Accompanying the dress are a white lace and black velvet collarette, a pair of black silk mitts and a fine linen handkerchief embroidered with the name "Betty." For this apparel the Museum is indebted to Miss Mary S. Buchanan, of Winchester, Va. For the administration of President Millard Fillmore, 1850–53, a lavender silk dress, including skirt and bodice, worn at the White House by Mrs. Fillmore, and deposited by Mrs. J. D. Larkin, of Buffalo, N. Y. For the administration of President Franklin Pierce, 1853–57, a dress of black moiré covered with black tulle embroidered in silver tinsel, worn by Mrs. Pierce on the occasion of the inauguration of the President on March 4, 1853, received from Mrs. John M. Corse, of Boston, Mass. For the administration of President Grover Cleveland, a dress consisting of a low-cut bodice and umbrella-shaped skirt; the former of the same pale green brocade silk as the skirt, trimmed with rose-colored velvet, the shoulders decorated with butterflies of cream lace and iridescent spangles; the latter brocaded with American Beauty roses; worn by Mrs. Cleveland during the first administration of Mr. Cleveland, 1885–89. This costume was deposited by Mrs. Thomas J. Preston, of Princeton, N. J.

Among the other additions were many of interest and note. A collection of the wearing apparel of Thomas Jefferson used when engaged in his daily pursuits at Monticello, consisting of doeskin, nankin, and seersucker breeches, a homespun linen shirt, a hand-knit sock, and white cambric stock bearing the initials "T. J.," and also a white linen sleeping bag carried by Mr. Jefferson on his long horseback rides, were lent by Miss Cornelia J. Taylor and Mrs. William Mann Randolph, of Charlottesville, Va. Several costumes which belonged to Mrs. James Monroe, comprising a dress of white brocaded silk embroidered with silver, having a low-cut bodice and

round-length skirt; a "sacque" dress of ivory brocaded silk embroidered with flowers in colors, Watteau-backed, and with full skirt and trained polonaise; a dress of cream-colored brocaded silk, embroidered with dahlias and leaves in colors, with round full skirt, overskirt, and low-cut bodice; a scarf of pale blue figured silk-gauze; together with four waistcoats of President Monroe, one of pale blue rep-silk embroidered in black straw and steel spangles, another of gold-colored satin elaborately embroidered in colors with floral designs, a third of cream-colored satin embroidered in colors with border of vine and flowers edged with plum-colored floss, and the fourth of cream-colored gros-grain silk embroidered in green, yellow, and dark pink with floral designs, all belonging to the Grafton Spurrier collection, were deposited by Mrs. R. G. Hoes.

Costumes and parts of costumes—examples of the typical Quaker garb worn in the early and middle part of the 19th century—including a black silk dress, a quilted skirt, kerchiefs, bonnets and other apparel of the period from 1800 to 1850; a gray silk wedding dress and other apparel worn by Rebecca L. Elkinton in 1863, and the wedding vest of Thomas L. Elkinton, of the same date, were a gift from Dr. Anna P. Sharpless, of Philadelphia, Pa. A baby's pink dress worn by Col. David DuBose Gaillard in 1860; a silk dress made in Paris, and a pair of silk stockings worn by Mrs. Edward Gendron Palmer, of South Carolina, grand-aunt of Mrs. Gaillard, at a ball given in honor of Lafayette at Columbia, S. C., in 1824, and a beaded purse made and owned by Dorcas Richardson, wife of Col. Richard Richardson, an officer in the American army during the War of the Revolution, were lent by Mrs. D. D. Gaillard, of New York. A number of relics of the Hays family of Boston and the Myers family of Richmond, comprising two knit silk night caps used by Moses Michael Hays about 1805, a white Mechlin lace wedding veil worn by Mrs. Sally Hays Myers in 1796, black satin slippers belonging to Mrs. Joyce Mears Myers of New York about 1768, and knee breeches and a pair of shoe buckles worn by Mr. M. M. Myers about 1795, were received from Mrs. Edward Cohen, of Washington. Mrs. Cohen also presented a tan satin empire gown which had belonged to Mrs. Samuel Myers, and a painted bodice worn by Mrs. Samuel Hays Myers about 1830–38.

A dress of ivory satin and gold brocade richly trimmed with French lace, worn by Mrs. Charles Warren Fairbanks, wife of the Vice President, at the inaugural ball of March 4, 1905, was received as a gift from Mr. Fairbanks. A calling costume of Mrs. Stephen B. Elkins, of Washington, including a gold lace hat with brown plumes, a skirt, waist, and girdle of light brown Brussels net embroidered with gold thread and beads, a coat of red velvet and brown net, and brown silk stockings and satin slippers, were deposited by Mrs.

Elkins. A dress of white satin elaborately trimmed with mica spangles and mother-of-pearl beads, worn by Mrs. John W. Foster, of Washington, while with her husband, the Hon. John W. Foster, on a special mission to Russia in 1897, was lent by Mrs. Foster. A large and interesting collection of bonnets of the 19th century, of various shapes, sizes, and colors, was received as a loan from Mrs. H. Kirk Porter, of Washington.

Exhibition and preparation of specimens.—The general work of preparation of specimens for the exhibition and reserve series was in charge of Mr. W. H. Egberts, under the supervision of the head curator. It comprised a wide range of activities, including the care and repair of specimens, the making of replicas, the modeling, casting and painting of new exhibits, the installation of lay-figure groups, etc. The principal new exhibits prepared, with a certain amount of outside help, comprised three lay-figure industrial groups consisting of two life-size figures each, illustrating the mining and quarrying industries of the aborigines. The figures and molds were in part made by Mr. U. S. J. Dunbar, sculptor, and were painted, costumed, and set up, with appropriate groundwork and fittings, by the laboratory force. These groups represented, respectively, work in a soapstone mine on Santa Catalina Island, Cal., the operation of an iron and paint mine in Missouri, and the working of a copper mine on Isle Royale, Mich. Seventeen full-length lay-figures were also modeled by Mr. Dunbar, and painted and costumed in the laboratory, for the Panama-Pacific Exposition. Five of these figures belong to a family group of Carib Indians of British Guiana, 6 to a family group of the Dyaks of Borneo, and 6 to a family group of the Zulu-Kaffirs of South Africa. A group of 7 figures illustrating the Eskimo of Alaska was likewise prepared for the exposition.

At the close of the year the enlargement and remodeling of the Bontoc-Igorot family group, the Kiowa family group, and the Cocopa family group were in progress, and 2 figures designed for the Maya stone-working group, modeled by Mr. Dunbar and finished in the laboratory, were being installed. During October, 1914, a photographer spent several days in the laboratory taking motion pictures of the making of life masks, and the finishing, painting, etc., of lay figures, for the Government exhibit at the Panama-Pacific Exposition.

Explorations.—No important explorations were undertaken, though Mr. Neil M. Judd, aid in the division of ethnology, conducted limited archeological investigations in western Utah under the auspices of the Bureau of American Ethnology. His examination of several mounds appears to indicate the former occupation of the region by a pre-Pueblan people of comparatively simple culture.

The dwellings were mere earth-covered lodges which seem to have given place to single-room houses with adobe walls and well-constructed roofs, and it is not unlikely that the people were ancestral tribes of some of the Pueblos of today.

DEPARTMENT OF BIOLOGY.

The additions in biology, though less extensive as a whole than in the previous year, included much material of particular scientific value. Of general contributions, those relating to the subjects of two or more divisions, there were several of a noteworthy character. The list may be headed with a benefaction from Dr. W. L. Abbott, consisting of a large and diverse collection made by Mr. H. C. Raven in continuation of his explorations in Dutch East Borneo at the expense of the donor. Of no less importance were immense collections from the *Tomas Barrera* expedition to the northwest coast of Cuba, comprising at least 10,000 mollusks and other invertebrates, nearly 3,000 fishes, and many reptiles and batrachians, for which the Museum is indebted to the generosity of Mr. John B. Henderson, a Regent of the Institution, who was assisted by Dr. Paul Bartsch of the Museum staff. The Bureau of Fisheries transmitted extensive series of marine invertebrates, 67 types of recently described fishes mostly from the Philippine Islands, and 172 fur seal skulls obtained by the naturalists who visited the Pribilof Islands in 1914 to study and report upon the condition of the seal herd. From Mr. Arthur de C. Sowerby were received numerous and noteworthy contributions of mammals, birds, reptiles and batrachians, fishes and insects, from little known districts in China, the fauna of which is but scantily represented in the Museum. Very acceptable, as coming from a region in which the Institution has recently undertaken investigations, were a series of birds, reptiles, batrachians, fishes and marine invertebrates from Panama, the gift of Mr. James Zetek. Through the generosity of the Carnegie Institution of Washington large collections of plants and marine invertebrates have been secured to the Museum, and acknowledgments are also due to the Biological Survey of the Department of Agriculture for the transfer at various times of miscellaneous material, such as reptiles, birds' eggs, nests and skeletons.

Mammals.—The mammals obtained in Dutch East Borneo by Mr. Raven have not yet been carefully studied, but they evidently constitute a very important complement to those previously gathered by Dr. Abbott in the region immediately south of that in which Mr. Raven worked. Dr. Abbott also presented 225 mammals from Kashmir, British East India, collected by himself. Several accessions transmitted by Mr. Arthur de C. Sowerby from northeastern China

and Manchuria contain specimens of unusual interest, such as a new squirrel of a genus not hitherto known from that part of China, and a very large bear belonging to a group quite distinct from the common brown bear of the Old World. The following rarities filling gaps in the exhibition series were acquired by purchase, namely, a skeleton of the gray whale, another of the aye-aye from Madagascar, and a specimen of *Hyomys meeki*, a large and little known rat peculiar to New Guinea.

The tanning of large skins by contract has kept pace with the needs of the division, 35 having been finished while work on 54 others was in progress at the close of the year. The division taxidermist made up or renovated over 360 smaller skins for the reserve series. Thirty-eight skeletons and 726 skulls were cleaned by Museum preparators, and 197 large and 3,850 small skulls by contract. The classified arrangement of skeletons and skulls of large mammals in the attic has progressed as rapidly as storage cases have been provided. During the year the families Cervidæ and Antilocapridæ were gone over with the result that all the ungulate mammals, except the Bovidæ, have now been provisionally sorted and placed under cover, and a preliminary separation by subfamilies of skulls and bones of the latter family has been made. Forty-two quarter-unit cases were installed for this work in place of the discarded stacks released for use elsewhere, but approximately 100 additional cases are still required for continuing the arrangement of large skulls and skeletons for which no provision now exists. A rearrangement of the collection of alcoholic mammals, in conformity with the system adopted in the division of reptiles, was begun. It involves the marking of each container and the writing of two catalogue cards for each.

The study series of cetaceans remains in the same condition as at the time of Dr. F. W. True's death. Although it is realized that it should be examined and stored in a more satisfactory manner than at present, it has been considered unwise to disturb it until the services of some competent specialist in this important branch can be secured.

In addition to the investigations indicated in the bibliography at the end of this report, the curator of the division, Mr. Gerrit S. Miller, jr., in conjunction with Mr. J. W. Gidley, has undertaken a very important rearrangement of the families of rodents, including the fossil members of the group. He has also in hand a monograph of the American bats of the genus *Myotis*, and has recently begun a critical study of certain recent and fossil great apes and Hominidæ, which promises very interesting results. The assistant curator, Mr. N. Hollister, finished a monograph of the prairie dogs and a revision of the genera of Procyonidæ, both of which are in press. Mr.

Edmund Heller, who had been engaged in a preliminary study of the east African mammal material collected in recent years by the Smithsonian and other expeditions, left for Peru toward the end of the year with the joint expedition of Yale University and the National Geographic Society. In view of the urgency of completing the final report on the African specimens, the subject has been turned over to Mr. Hollister, who is devoting to this important task all of the time which can be spared from routine work. Dr. C. H. Merriam, associate in zoology, is continuing his researches on the bears and other North American mammals.

The collections of the division have been constantly utilized by members of the Biological Survey, and Dr. O. P. Hay, of the Carnegie Institution of Washington, has also consulted them in connection with his studies of Pleistocene mammals. Dr. M. W. Lyon, jr., spent considerable time in the preparation of a paper on the mammals obtained by Dr. W. L. Abbott on islands off the west coast of Sumatra; and Messrs. W. H. Osgood and E. A. Preble, who visited the Pribilof Islands in 1914 on behalf of the Department of Commerce, examined the seal material. Specimens were lent for study to Dr. G. M. Allen, of the Museum of Comparative Zoölogy; to Dr. J. A. Allen, Dr. William K. Gregory and Dr. W. D. Matthew, of the American Museum of Natural History; to Mr. G. F. Eaton, of the Peabody Museum of Yale University; to Mr. Childs Frick, of Bryn Mawr, Pa.; to Mr. W. H. Osgood, of the Field Museum of Natural History; to Mr. W. P. Taylor, of the University of California, and to the California Academy of Sciences.

Birds.—The Bornean collection from Mr. Raven contained a large number of interesting species especially among the timeliine birds, notably a *Rubigula paroticalis*, and also in other groups, such as the ibis, *Inocotis papillosus*, of which both genus and species are new to the Museum. The birds from Mr. Sowerby form very acceptable additions to the somewhat scant series of Chinese forms, among the species not previously in the collection being two owls, *Glaucidium orientale* and *Strix uralensis nikolskii*, a raven, *Corvus corax ussuriensis*, a grouse, *Tetrastes bonasia septentrionalis*, and a recently described jay, *Garrulus diaphorus*. Mr. Otto Holstein, of San Antonio, Tex., presented some very desirable material from Ecuador, comprising 163 skins, among which are a number of species now for the first time acquired, such as *Mecocerculus poecilocercus*, a flycatcher, and *Cinclodes albidiventris*, an ovenbird, as well as a new species of seed-eater, *Sporophila incerta*. Twenty-one Australian birds were received in exchange from the Western Australian Museum and Art Gallery, at Perth; and a rare Amazon parrot, *Amazona bodini*, was the gift of Mr. Edward S. Schmid, of Washington.

A unique accession was the last of the passenger pigeons, *Ectopistes migratorius*. This individual, which had been carefully tended for many years in the Cincinnati Zoological Gardens, died on September 1, 1914, and its body in the flesh was generously presented to the Museum by that establishment. It was known as "Martha" and is said to have been hatched in the Gardens in 1885, having consequently attained an age of 29 years. The skin, excellently mounted by Mr. Nelson R. Wood, was placed on exhibition, while the body, after its anatomy had been studied, was preserved in alcohol. With the death of this individual one of the most interesting and beautiful of North American birds became extinct. Dr. C. W. Richmond, in commenting on this acquisition observes: "In the language of the committee reporting the first game laws enacted in Ohio, in 1857, 'The passenger pigeon needs no protection. Wonderfully prolific, having the vast forests of the North as its breeding grounds, travelling hundreds of miles in search of food, it is here today and elsewhere tomorrow, and no ordinary destruction can lessen them or [any] be missed from the myriads that are yearly produced.' It is truly the irony of fate that the final extinction of this species should take place in the same State 57 years later."

The rearrangement of the study series of skins was continued as opportunity offered, and as much progress made as could be expected with the present inadequate facilities. The work was carried through 24 half-unit cases, comprising the remainder of the birds of prey, all of the Steganopodes (pelicans, cormorants, gannets, etc.), the flamingoes, the swans, and a part of the ducks. As the task proceeds it is found that more case room is required than was at first anticipated, owing partly to the previous crowding of the larger and especially the aquatic birds, and partly to the many large specimens recently withdrawn from the exhibition series and remade into skins. In connection with the transfers to the reserve series, all of the specimens are relabeled, a labor often requiring extended search in the catalogues to verify the records and correct errors, some of which date back to the original numbering of early days, while others are incidental to the change from mounted specimens to skins. The search for missing type specimens was continued but with indifferent results, only two having been located.

Good progress is reported in sorting and arranging the collection of skulls, breast bones and skeletons received during the year, among them having been a large quantity of old material found in the osteological storage and turned over to the division. Many of the specimens were placed in suitable containers and labeled, and a considerable mass of material was picked out for preparation by the cleaners. There remains, however, a great deal to do before the

osteological series can be placed in good and final shape. The more important accessions of birds' eggs received during several years past, amounting to 242 sets and 923 specimens, were labeled and distributed in the cases.

The curator of the division, Mr. Robert Ridgway, was chiefly occupied in the preparation of manuscript for his monumental work on the Birds of North and Middle America, which is being issued as Bulletin 50 of the Museum. Six volumes have already been published, the manuscript of volume 7 was completed in May, and volume 8 is now in course of writing. Dr. Charles W. Richmond, assistant curator, devoted most of his spare time from administrative work to bibliographical and nomenclatorial research, while Mr. J. H. Riley, aid, in addition to assisting Mr. Ridgway in connection with Bulletin 50, studied and identified the birds received during the year from Ecuador and China. Dr. E. A. Mearns, U. S. Army (retired), associate in zoology, continued his studies on east African birds from the various expeditions to that region, and Mr. A. C. Bent, of Taunton, Mass., his preparation of the life histories of North American birds. Members of the Biological Survey made frequent use of the collections, especially Mr. H. C. Oberholser who consulted the North American and Malayan series of skins, and Mr. Alex. Wetmore who conducted extensive researches in the osteological series, incidentally arranging many of the specimens for the Museum. Among other ornithologists from this country and abroad who spent more or less time in the division, may be mentioned Mr. C. C. Custer, of Balboa, Canal Zone; Mr. Childs Frick, of Bryn Mawr, Pa.; Mr. F. Seymour Hersey, of Taunton, Mass.; Mr. Wharton Huber, of Gwynedd Valley, Pa.; Mr. J. Parker Norris, jr., of Philadelphia, Pa.; Mr. D. E. Oleson, of Titusville, Pa.; Mr. W. H. Osgood, of the Field Museum of Natural History; Father W. C. Repetti, S. J., of Fordham University; Prof. R. M. Strong, of the University of Mississippi; Mr. W. E. Clyde Todd, of the Carnegie Museum; Mr. John P. Young, of Youngstown, Ohio; Dr. T. W. Richards, U. S. Navy; Dr. R. W. Shufeldt, and Mr. Edward J. Court, of Washington; and Mr. George D. Wilder, of Pekin, China.

A large number of specimens were lent for study to the following institutions and individuals, namely: Mr. Frank M. Chapman and Mr. W. de W. Miller, of the American Museum of Natural History; the California Academy of Sciences, for the use of Mr. L. M. Loomis; Mr. Todd, of the Carnegie Museum; Mr. Henry K. Coale, of Chicago, Ill.; Mr. C. B. Cory, of the Field Museum of Natural History; Mr. Outram Bangs, of the Museum of Comparative Zoölogy; Dr. Joseph Grinnell, of the Museum of Vertebrate Zoology of the University of California; the Museum of History, Science and Art, at

Los Angeles, Cal., for the use of Mr. J. E. Law; and Dr. R. W. Shufeldt.

Reptiles and batrachians.—Reference has already been made to the material received from Dr. W. L. Abbott, the Biological Survey, Mr. A. de C. Sowerby, Mr. John B. Henderson and Mr. J. Zetek. Dr. J. C. Thompson, U. S. Navy, and Mr. H. C. Kellers contributed a large number of specimens from California and Mexico; and the McMahon Museum at Quetta, Baluchistan, sent 10 specimens of snakes, including several species new to the Museum. A collection from Brownsville, Tex., presented by Mr. R. D. Camp, was particularly interesting in containing representatives of a new species of frog of the genus *Syrrhophus;* while another new species, a coral snake from Panama, was a gift from Dr. S. T. Darling, of that place.

The preservation of the specimens in this division, which are mainly alcoholic, has been systematically attended to, and the collection is maintained in excellent condition. A few dry preparations and skulls of turtles were cleaned, and it is hoped in the course of a few years to assemble such a series of skulls illustrating the variations in this order as will permit of an intensive study of the North American testudinata. Progress was made in the card cataloguing of the collection, though not as much as during the previous year, owing to the fact that the cataloguer was detailed for part of the time to do similar and more urgent work in the division of mammals.

Dr. Leonhard Stejneger, head curator of biology and also curator of this division, continued, in such time as could be spared from other duties, his studies of North American testudinata and made considerable progress toward a monographic account of the order. Dr. Thomas Barbour, of the Museum of Comparative Zoölogy, consulted the collection on several occasions in connection with his studies of West Indian herpetology. Other students who had access to the collection were Prof. A. H. Wright, of Cornell University; Dr. O. P. Hay, of the Carnegie Institution of Washington; and Mr. E. R. Dunn, of Haverford College, Pa. Specimens were lent for study to Dr. Thomas Barbour and to Dr. J. C. Thompson, U. S. Navy.

Fishes.—While the number of specimens transferred by the Bureau of Fisheries was smaller than usual, the accessions from that source were nevertheless of much value, including, as they did, 67 types chiefly from the Philippine Islands, collected by the steamer *Albatross.* More than 2,900 specimens obtained on the *Tomas Barrera* expedition to northwestern Cuba, were contributed by Mr. John B. Henderson. The cooperation of the Museum with Dr. Fred Baker in his trip to the Orient resulted in the addition of 346 fishes from

Takao, Formosa; while a collection of about the same size, particularly rich in eels, from Panama, was received as a gift from Mr. Robert Tweedlie.

Almost the entire time of the assistant curator and his assistant was required in caring for and rearranging the collections, and in selecting duplicate material for exchanges. The number of specimens bottled, labeled and installed amounted to several thousands through the necessity of separating different species which had been placed promiscuously in storage jars.

The work of revision and rearrangement begun the previous year by Prof. J. Otterbein Snyder, the eminent ichthyological specialist of Leland Stanford Junior University, was continued until January, but not concluded. As explained in the last report, his services were secured for a complete overhauling and revision of the ichthyological collection, the elimination of specimens not deemed worthy of further preservation, the segregation of the type and other especially valuable specimens, and the setting aside of such material as might be suitable for exchange purposes. Unfortunately Prof. Snyder was obliged to sever his connection with the Museum before this task had been finished, though the most pressing and necessary work was accomplished. It is of extreme importance that some means be found for bringing this matter to a final conclusion, since no other of the natural history collections are more important for economical consideration.

The assistant curator, Mr. Barton A. Bean, found little time for research work, although collections from Panama and the Red Sea were identified, and a beginning was made with the fishes from the *Tomas Barrera* expedition. Dr. Snyder, while engaged upon the revision of the collections, was able to make some special investigations, particularly with regard to type specimens and the fish fauna of the so-called Lahontan Basin. Dr. W. C. Kendall, Mr. Lewis Radcliffe and Mr. W. W. Welsh, of the Bureau of Fisheries, consulted the collections in connection with their official work, and a large lot of young and larval fishes was temporarily transferred to that Bureau to facilitate their study. Specimens were also lent to Dr. Snyder, Prof. E. C. Starks and Dr. C. H. Gilbert, all of Leland Stanford Junior University; and to Mr. J. T. Nichols, of the American Museum of Natural History.

Marine invertebrates.—As explained on a later page, the two divisions of mollusks and marine invertebrates were consolidated during the year under the latter designation.

For the most notable accessions of the year the division was indebted to the generosity of Mr. John B. Henderson, who presented a very large collection of selected specimens of mollusks, all in good condition, generally identified and labeled, constituting the most

important contribution to the reserve series that has been received in some years. It contains material from every part of the world except the West Indian region. In addition, Mr. Henderson also turned over to the Museum, as a part of the results of the *Tomas Barrera* expedition to Cuba, which he mainly financed, approximately 10,000 specimens of invertebrates, of which 8,000 were mollusks, including many species new to the collection. In this exploration he was assisted by Dr. Carlos de la Torre, of Havana, and Dr. Paul Bartsch.

Eight separate collections of much scientific value were transferred by the Bureau of Fisheries. The more prominent of these were clypeastroid sea-urchins to the number of 767 specimens from cruises of the steamer *Albatross* in 1887, 1902 and 1906, identified and described by Dr. H. L. Clark in the Memoirs of the Museum of Comparative Zoölogy; the crinoids from the Philippine expedition of the steamer *Albatross*, 1907–10, worked up by Mr. Austin H. Clark; the Asteroidea, including types and cotypes, from cruises of the steamer *Albatross* in 1891 and 1899–1900, under the direction of Alexander Agassiz, described by Prof. H. Ludwig in the Memoirs of the Museum of Comparative Zoölogy; more than 150 specimens of parasitic copepods, embracing types and cotypes, studied by Dr. Charles B. Wilson and the results published in the Proceedings of the National Museum; about 9,000 specimens of crustaceans taken in connection with the biological survey of San Francisco Bay by the steamer *Albatross* in 1912–13; and about 800 specimens of miscellaneous marine invertebrates collected by the steamer *Albatross* in 1914 during a further survey of San Francisco Bay and an investigation of the halibut banks off Washington and Oregon.

Special acknowledgments are due to the Carnegie Institution of Washington for splendid series of corals and mollusks obtained through the efforts of Dr. A. G. Mayer and his staff of collaborators at the Tortugas Marine Biological Laboratory. Among the most noteworthy was a set of 1,000 specimens of corals from the Bahama Islands and Florida, including, with few exceptions, all of the specimens planted by Dr. T. Wayland Vaughan and used as the basis of his study of their rate of growth. In some respects, according to Dr. Vaughan, this collection is unique and the most interesting in existence. Additional material consisted of about 300 specimens of corals, representing some 75 species, from Murray Island, Australia, together with many bottom samples from the same locality, collected by Dr. Mayer, who also contributed 1,000 land shells and 30 corals from the Bahama Islands. During the botanical expedition of Dr. J. N. Rose to South America, he and Mrs. Rose secured over 200 specimens of invertebrates for the Museum in northern Chile.

From Prof. C. C. Adams, of the New York State College of Forestry at Syracuse, was received the entire series of types of the molluscan genus *Io*, the basis of his monograph in course of publication by the National Academy of Sciences, besides a very large number of additional specimens. Dr. F. Wood-Jones, of London, England, presented about 106 specimens of corals, representing about 50 species, from the Keeling Islands in the Indian Ocean, including the material figured in papers published by him in the Proceedings of the Zoological Society of London and in his book "Coral and Atolls." The Museum of the University of Michigan contributed 14 specimens of crustaceans from the Santa Marta Mountains in Colombia, collected by the Bryant Walker expedition and described by Mr. A. S. Pearse. Two hundred specimens of small reef crabs and 30 species of corals, the latter from around Fanning Island, Pacific Ocean, were received as a gift from the College of Hawaii, Honolulu; and 11 alcyonarians from the Philippine Islands were obtained in exchange from the University of the Philippines at Manila.

Types and cotypes of species were presented as follows: By Mr. George H. Clapp, of Pittsburgh, Pa., cotypes of recently described land shells; by Prof. G. S. Dodds, of the University of Missouri, type slides and specimens of *Streptocephalus coloradensis* and *Diaptomus arapohensis* from Colorado, described by himself; and by Dr. C. D. Marsh, of the Department of Agriculture, the types of his *Diaptomus virginiensis*. A gift from Mr. H. K. Harring of 50 microscopic slides of Rotatoria from the District of Columbia included types, as did also a collection of 30 Japanese crabs from Mr. T. Urita, of Kagoshima, Japan. Two cotypes were contained in a small lot of crinoids presented by Mr. Frank Springer. Here may also be mentioned the gift of more than 175 specimens of parasitic copepods from the private collection of Dr. Charles B. Wilson; of 29 specimens of identified corals from Dr. J. Stanley Gardiner, of the University of Cambridge, England; and of 65 specimens of Brazilian crabs from Dr. H. von Ihering, of São Paulo. Reference has elsewhere been made to the marine invertebrates collected in Borneo by Mr. Raven, and in Panama by Mr. Zetek. A number of interesting specimens were added by members of the Museum staff, including about 160 specimens from the Tortugas, Fla., by Dr. T. W. Vaughan; over 160 crustaceans from the District of Columbia and neighboring region, by Mr. C. R. Shoemaker, and 100 miscellaneous invertebrates from Virginia, by Miss P. L. Boone.

In the spring of 1914 a circular soliciting specimens of earthworms and giving directions for their collection and preservation was distributed to a number of correspondents, this material being desired

for a special study and for addition to the collection. There were several favorable responses, the principal contributions coming from the Hon. J. D. Mitchell, of Victoria, Tex.; Prof. H. A. Hill, of Cumberland University, Lebanon, Tenn.; and Dr. W. K. Fisher, of Leland Stanford Junior University.

The sorting of the Philippine mollusks and their classification by families, as well as their registration and labeling, were concluded. The same is true with regard to the White collection, while the labeling and recording of the Henderson collection of mollusks has been continued steadily, with good progress, in the intervals of other work. Marked advance was also made in the cataloguing in other classes of invertebrates, most important being the relabeling, card-cataloguing and systematic arrangement of the extensive collection of crinoids, which aggregate some 2,500 entries.

Dr. William H. Dall, curator of mollusks, continued his revision of the west American molluscan fauna, giving special attention to the families Emarginulidæ and Semelidæ, and the genus *Nucella*. A brief report was made to the Brooklyn Institute of Arts and Sciences on some mollusks collected during the expedition under its auspices to South Georgia, in the antarctic region. Other results of Dr. Dall's work completed during the year are indicated in the bibliography. About one-half of the west American series of mollusks has now been carefully revised, new material properly placed and the nomenclature revised to date by Dr. Dall.

Miss Mary J. Rathbun, associate in zoology, studied the spider crabs (family Inschidæ) from the expedition of the Bureau of Fisheries steamer *Albatross* to the Philippine Islands in 1907–10, and in the same connection named the unidentified specimens of this family previously in the Museum. Forty-one new species were found and described. Miss Rathbun also worked up the fresh-water crabs (Pseudothelphusinæ) obtained at Santa Marta, Colombia, by the Bryant Walker expedition, and reported on a small collection of crabs secured by the Australian Antarctic expedition of 1911–14, under the direction of Sir Douglas Mawson, as a contribution to the memoirs of that exploration. She likewise determined the extensive collection of decapod crustaceans, including several new forms, obtained during the *Tomas Barrera* expedition of 1914 to the northwest coast of Cuba, and identified large series of material sent from Japan by Mr. T. Urita, from Brazil by Dr. H. von Ihering, and from the coast of Chile, collected by Dr. and Mrs. J. N. Rose. Her researches on fossil decapod crustaceans are referred to elsewhere.

Dr. Paul Bartsch, curator of the division, completed his report on the Turton collection of South African marine mollusks and other shells from the same region preserved in the Museum, besides ac-

counts of the Philippine land shells of the genus *Schistoloma*, of the recent and fossil mollusks of the genus *Rissoina* from the west coast of America, and a number of smaller papers. He is at present engaged in the preparation of reports on the operculate land shells of the Philippines, and the Eulimidæ and Tertiary Pyramidellidæ of America. Contributions by Mr. Austin H. Clark, assistant curator, published during the year, comprised the first volume of a monograph of existing crinoids, issued as Museum Bulletin 82, and other papers on crinoids and onychophores. Mr. Clark also completed his study of the crinoids collected by the Australian Fisheries Investigation steamer *Endeavour*, and continued his investigations of the material obtained by the Dutch steamer *Siboga*, the Danish steamer *Ingolf* and the steamer *Gauss* of the German South Polar expedition, besides preparing manuscript for a second part of Bulletin 82. Mr. Waldo L. Schmitt, assistant curator, had nearing completion a report on the decapod crustaceans of San Francisco Bay obtained during the survey by the Bureau of Fisheries in 1912–13, and began upon a study of the macruran crustaceans of the east coast of North America. Mr. William B. Marshall, assistant curator, was almost wholly occupied with the care, identification, recording and arrangement of the molluscan material received during the year. The limited time available for research was devoted to the study of pearly fresh-water mussels, and a short paper on three new species of Anodontoides from Brazil was submitted. Mr. C. R. Shoemaker, aid, prepared an account of the amphipods from the South Georgia (antarctic) expedition, and made progress with his studies of this crustacean group, especially as represented on the east coast of North America.

Dr. T. Wayland Vaughan, custodian of madreporarian corals, continued his investigations on West Indian and Pacific forms; and Mr. H. K. Harring, custodian of the Rotatoria, contributed a paper on specimens of that group from Panama, with descriptions of new species. The work of Dr. C. W. Stiles, custodian of the helminthological collections, related to sanitation and the study of the parasites of school children, many such, both white and colored, having been examined to determine the relative frequency of parasites among them, their influence on the mental and physical development of children, etc.

The facilities afforded by the division were availed of by a number of specialists and students, of whom the following may be mentioned, namely, Mr. John B. Henderson, of Washington, who continued his researches on Antillean mollusks; Prof. W. P. Hay, of Washington, who spent some time in the preparation of a report on the crustaceans found at the Beaufort Laboratory of the Bureau of Fisheries; Mrs. Kate S. Outwater, of Washington, who investigated the nepionic shells of a chain of *Busycon canaliculatum*; Miss Katherine Burden,

of Washington, who devoted several months to a biometric study of the shells of *Vivipara lanaonis* from the Philippines; and Mr. F. M. Anderson, of the California Academy of Sciences.

The extent to which the collections of the division have been made the basis of important researches by scientific men, not members of the Museum staff, both at home and abroad, is indicated by the citations in the bibliography at the end of this report. Among those who in recent years have had extensive series of material sent to them for elaboration are Prof. C. C. Nutting, Prof. A. E. Verrill, Dr. J. A. Cushman, Dr. H. J. Hansen, Prof. C. B. Wilson, Dr. H. B. Bigelow and Dr. H. A. Pilsbry. Some of these and others still have collections in their possession, on which reports are forthcoming. Additional material for study was sent during the year to Dr. J. A. Cushman, of the Boston Society of Natural History, consisting of Foraminifera from the North Pacific Ocean and New England; to Dr. Max Ellis, of the University of Colorado, a large number of discodrilid worms from crayfishes; to Prof. Frank Smith, of the University of Illinois, a large number of earthworms from California and Texas. Specimens were also supplied to Dr. H. A. Pilsbry, of the Philadelphia Academy of Sciences; Dr. H. J. Hansen, of Gjentofte, Denmark; Dr. C. A. Kofoid, of the University of California; and Dr. Aaron L. Treadwell, of Vassar College.

Insects.—The Bureau of Entomology of the Department of Agriculture furnished, as usual, the greatest number of specimens, which were contained in several transfers and aggregated 7,329 specimens, mostly Hymenoptera, Diptera and Odonata, besides over 900 vials of miscellaneous insects in alcohol. Included in one of the accessions were the types of 69 species of Hymenoptera. A gift of Peruvian material from Dr. C. H. T. Townsend, forming an exceedingly valuable acquisition, consists of 118 slides, 443 vials of reproductive systems and over 3,000 adult Diptera, with the types of four species. The tendency among entomologists to deposit their type specimens with the national collections, thereby providing for their permanent preservation and making them more accessible to scientific workers in general, is well exemplified in certain gifts from Dr. T. D. A. Cockerell, of the University of Colorado, which comprise, besides numerous wasps and miscellaneous insects, the types of 81 species of Hymenoptera, cotypes of 10 species, and an allotype of 1 species. From Copenhagen, Denmark, two valuable contributions were received, one from Mr. E. Rosenberg illustrating the life histories of 94 species, together with the biological material of 68 species of European Coleoptera; the other from Mr. J. P. Kryger, consisting of 146 vials of Coleoptera and 51 vials of Hymenoptera.

Because of delay in receiving the necessary drawers, but little progress was made in the work of transferring specimens to the per-

manent insect trays, which have been designed for the better preservation of their contents than under the old system.

The custodians attached to the division, who are mostly members of the Bureau of Entomology, were mainly occupied in the working up of material with reference to its economic bearing, but in the course of their researches they discovered and described many new species, as noted in the bibliography. Mr. J. C. Crawford, associate curator of the division, published two papers of a revisional character, and Dr. A. D. Hopkins, custodian of forest tree beetles, prepared a list of generic names and their type species in the coleopterous superfamily Scolytoidea, which was printed in the Proceedings of the Museum.

Besides members of the Museum and Bureau staffs, a number of entomologists consulted the collections. Mr. William Schaus was present most of the year, and submitted for publication a voluminous paper entitled "A generic revision of the American moths of the subfamily Hypeninae." Others who worked in the division, generally for only short periods, were Mr. George Shinji, of the University of California; Mr. Charles Dury, of Cincinnati, Ohio; Dr. F. E. Lutz and Mr. A. J. Mutchler, of the American Museum of Natural History; Mr. Frank L. Thomas, of Athol, Mass.; Mr. B. Preston Clarke, of Boston, Mass.; Mr. Henry Bird, of Rye, N. Y.; and Mr. C. P. Alexander, of Cornell University. Specimens were lent for study as follows: Odonata to Mr. Clarence H. Kennedy, of Palo Alto, Cal.; Orthoptera to Mr. Morgan Hebard, of the Academy of Natural Sciences of Philadelphia; Coleoptera to Mr. Charles Schaeffer, of the Museum of the Brooklyn Institute, Mr. J. A. Hyslop, of the Entomological Laboratory, Hagerstown, Md., Mr. V. E. Shelford, of the University of Illinois, and Dr. E. C. Van Dyke, of the University of California; Diptera to Prof. C. W. Johnson, of the Boston Society of Natural History, Prof. A. L. Melander, of the Washington Agricultural Experiment Station, and Mr. E. T. Cresson, jr., of the Academy of Natural Sciences of Philadelphia; Aphaniptera to Mr. F. C. Bishopp, of Dallas, Tex.; Hemiptera to Mr. H. G. Barber, of Roselle Park, N. J.; and miscellaneous insects to Mr. R. T. Young, of the University of North Dakota, and Mr. H. T. Fernald, of the Massachusetts Agricultural College.

Plants.—The past year surpassed all of the preceding 10 years, except 1913, in the number of plants received. Nearly one-fourth of the total aggregate, or 12,505 specimens from various parts of the United States, was deposited by the Department of Agriculture. Several important collections were included, the largest consisting of 7,300 grasses, of which about 1,300 have been incorporated in the herbarium, the remaining 6,000 being classed as duplicates, to be dis-

tributed in 30 sets of 200 numbers each, and as the identifications are based on the critical studies of Prof. A. S. Hitchcock and Mrs. Agnes Chase the value of the sets will everywhere be recognized. About 1,500 specimens of phanerogams obtained in the western United States by Dr. W. W. Eggleston are especially noteworthy, as are 675 phanerogams from the United States and western Canada collected by Prof. Hitchcock.

The New York Botanical Garden contributed 1,649 specimens, mainly West Indian but embracing a set of 262 mosses from the Philippine Islands. From the Bureau of Science in Manila were received 4,830 specimens, obtained chiefly in the Philippines though about 930 were from China, the Malay Peninsula and Kamerun. A valuable collection of approximately 8,000 plants from the Canary Islands, obtained under her direction a number of years ago, was presented by Mrs. O. F. Cook. About 3,000 specimens from South America, gathered by Dr. J. N. Rose in the course of his investigation of the cactus flora of western South America during the summer of 1914, were contributed by the Carnegie Institution of Washington.

Among other important accessions were 2,500 miscellaneous phanerogams, the gift of Mr. D. LeRoy Topping, of Manila, P. I.; 500 algae from North Carolina, deposited by the Bureau of Fisheries; 610 specimens of Arizona plants presented by Mrs. Walter Hough, of Washington; and 395 plants from Maine presented by Dr. Dana W. Fellows, of Portland, Me. Mr. Paul C. Standley and Mr. H. C. Bollman collected 790 plants for the Museum in New Mexico; about 3,900 specimens of New Mexican plants were obtained from the New Mexican Agricultural College in exchange; and 585 specimens from Mexico were purchased.

The number of plants mounted for the general herbarium during the year was 17,700. The greater part of these were also registered in the permanent record books and await distribution to their proper places in the cases, as do also the phanerogams of the Charles Mohr collection, which have now been made ready for this purpose. The work of arrangement has, as usual, been greatly delayed by more urgent matters of routine, such as attention to the current accessions, the identification of miscellaneous specimens sent to the Museum from many sources, and the preparation of specimens for lending and for exchanges. The withdrawal of Dr. Edward L. Greene's collection, which had been on deposit for some 10 years, released sufficient space to permit of provision for a continuous arrangement of the entire phanerogamic study series, with some additional room for relieving the congestion which was becoming rather serious.

The segregation of type and duplicate type specimens of phanerogams, referred to in the last report, was continued by Mr. Standley, and more than 2,000 specimens were labeled, recorded and added to

the series. The purpose of this work is to insure greater safety to the choicer parts of the collections, the parts which could not be replaced, and which in the general herbarium might be subjected to rougher usage. By this arrangement also the types are made more accessible. The important task of putting the cryptogamic collections into proper shape was, unfortunately, interrupted by the resignation of the aid employed for that purpose. A beginning, however, had been made by preparing complete generic indices of the algae, fungi, lichens, hepaticae and musci, based upon the "Natürlichen Pflanzenfamilien" of Engler and Prantl, and the algae were all mounted and rearranged. Similar work on the lichens had also been started.

Mr. Frederick V. Coville, curator of the division, continued his studies of the genus *Vaccinium* begun a number of years ago. The preparation of a new local flora covering the flowering plants and vascular cryptogams of Washington and vicinity, proposed by Prof. A. S. Hitchcock and Mr. William R. Maxon, will have the benefit of his general supervision. Dr. J. N. Rose, associate in botany, has still in progress his investigation of the Cactaceae under the auspices of the Carnegie Institution of Washington. At the close of the year he was conducting field investigations in southern Brazil and Argentina.

Mr. William R. Maxon, associate curator, was the author of several short papers describing new species or containing revisions of small groups of species, and continued general work upon the ferns of North America, especially of the genus *Polypodium*. Mr. Paul C. Standley, assistant curator, prepared a number of brief papers, including one relating to the families Chenopodiaceae and Amaranthaceae for the North American Flora. The Flora of New Mexico, the joint work of Prof. E. O. Wooton and Mr. Standley, was published as volume 19 of the Contributions from the National Herbarium. Mr. G. P. Van Eseltine, aid, previous to his resignation in May, had undertaken a revision of the North American species of *Selaginella* of the *S. rupestris* group, on which a preliminary paper was submitted for publication. Mr. E. S. Steele, editorial assistant, devoted as much time as could be spared from his regular duties to the study of the genus Laciniaria. Dr. E. L. Greene, associate in botany, made some progress with the second part of Botanical Landmarks, while Capt. John Donnell Smith, also associate in botany, continued his studies of Central American plants.

The herbarium was consulted by many members of the scientific staff of the Department of Agriculture. Among other professional botanists who conducted researches in the division were Prof. J. N. F. Wille, director of the Botanical Garden and Museum at Christiania, Norway; Prof. W. A. Setchell, of the University of California;

Dr. N. L. Britton, director of the New York Botanical Garden, and Dr. P. A. Rydberg and Dr. F. W. Pennell, of the same establishment; Mr. F. Tracy Hubbard, of Cambridge, Mass.; and Mr. E. D. Merrill, botanist of the Bureau of Science, Manila, P. I.

A larger number of plants were lent for study and determination than in the previous year, and while many of these were supplied for the benefit of the applicant, in most cases the Museum was equally the gainer in obtaining authoritative identifications of the specimens borrowed. The principal sendings were as follows: An aggregate of 877 specimens to the New York Botanical Garden, comprising material in many families of phanerogams and several groups of cryptogams; 312 specimens of Euphorbiaceae to the Field Museum of Natural History for the use of Dr. C. F. Millspaugh; 320 lichens to Mr. G. K. Merrill, of Rockland, Me., for identification; 607 specimens to the Gray Herbarium of Harvard University, for the use of Mr. G. S. Torrey, Mr. Harold St. John, and Dr. B. L. Robinson, curator of the Herbarium; 161 specimens of algae of the order Zygnemales to Prof. E. N. Transeau, of Charleston, Ill., who is making an extended investigation of this difficult group; and 291 specimens of *Senecio* to the Missouri Botanical Garden for study by Dr. J. M. Greenman, the principal American authority on this group.

Work of preparators.—The preparators were mainly employed in mounting specimens for filling gaps in the exhibition collections and replacing old and poorly preserved specimens with fresh ones. During the last three months of the year, however, attention was chiefly paid to the installation of the large cast and skeletons of whales in the new building. Mr. George B. Turner, chief taxidermist, with his assistant, Mr. William L. Brown, mounted eleven large and medium sized mammals, and modeled and cast two other specimens which are ready for the skin. They also did much work of repair and renovation, and rebuilt the accessory parts of the African buffalo group, a difficult and tedious task, as the plants brought from Africa, though well preserved, required prolonged treatment before they could be made presentable. Mr. Nelson R. Wood, bird taxidermist, mounted 75 birds for exhibition, and remounted and renovated 30 more, besides preparing a number for the study series. Mr. George Marshall was chiefly engaged in mounting small and medium sized mammals and otherwise assisted in the installation of exhibits.

Mr. J. W. Scollick, osteologist, cleaned and prepared skeletons and skulls of mammals, birds, turtles and fishes to the number of 894 specimens; took an important part in the transfer of the whale skeletons, their renovation and reinstallation; and remounted the skeleton of the extinct Steller's sea-cow. He also cleaned over 2,000 specimens of corals for study purposes. Mr. C. E. Mirguet, preparator, remodeled and reinstalled the large American alligator which had been

in storage for some years, and remounted the okapi skeleton. During the latter part of the year, his time was entirely occupied in connection with the moving of the whale collection and its arrangement in the new building. Mr. William Palmer, preparator, combined the two groups of Carolina parrakeets into one, which included the modeling of a large hollow tree and the making and arrangement of new accessories. He also moved to the new building, and repaired and repainted, the models of the giant squid and octopus, and greatly improved the faunal exhibit of the District of Columbia, both by preparatorial work and by the addition of species of mammals, birds, reptiles and batrachians.

Exhibition collection.—While no large groups of mammals were added to the exhibition series, several of those previously installed were materially changed and improved. When the African groups of buffaloes and zebras were prepared a few years ago there were no accessories from Africa at hand and material from local sources was introduced, pending arrangements for representing these animals in settings actually illustrating their natural environment, as was done with so much success in connection with the hartebeest and rhinoceros. Upon the arrival from Africa, during last year, of the necessary material, these two groups were revised by their builder, Mr. Turner. The buffaloes are now represented on the edge of a papyrus swamp, the highly characteristic habitat of this animal, producing a striking scene not to be witnessed elsewhere than in the home of this animal, and the substitution of this peculiar vegetation effectually breaks up the monotony of the surroundings of the other groups, which show various phases of the arid regions. The new accessories of the zebra group, though naturally characteristic of the arid regions, present an aspect distinct from that of the others through the introduction of broken volcanic rock and different vegetation. The appearance of another mammal group, that of the Spitsbergen polar bear with its two cubs bending over a young seal carcass, was also improved by being transferred to a larger case, with a new and more effective base.

Of new individual mountings introduced in the mammal series, especially noteworthy was the large and rare Père David deer from China, differing strikingly from all other deer in the length of its tail and the peculiar shape of its antlers. Another equally remarkable form was the long-necked antelope, known in its African habitat as the gerenuk, characterized by the extreme elongation of its legs, neck, and lips, whereby it is enabled to browse upon the leaves of shrubs and trees to a considerable distance from the ground. A fine specimen of the large Paraguay jaguar was also added, and new and excellent preparations of the male Virginia deer and the Australian dog, the dingo, replaced old and poorly mounted skins of the same forms. Less conspicuous, but of equal importance to the

series and showing much artistic merit in their mounting, were numerous small mammals belonging in various faunal sections of the exhibition. Three of the large African antelope cases were rearranged, the specimens being removed from their old wooden bases and placed directly on the floor. This is considered to have been an advantageous change, as it permits greater latitude in the installation. As not all of the specimens were mounted to stand on a perfectly level surface, the bottoms of these cases have been covered with a thin layer of sand, stained to match the olive paint of the floor, a color so neutral as not specially to attract attention.

A noteworthy addition to the bird exhibition was a large group representing a flock of Carolina parrakeets just waking from their night's rest in a hollow tree and beginning to feed. These birds were formerly displayed in two small groups, neither of which was wholly satisfactory. The combination has been eminently successful in creating a charming group which illustrates various interesting characteristics in the habits of the only North American member of the tropical parrot family. By the introduction of a light cover of snow, beautifully contrasting with the gay plumage of the birds, the fact is emphasized that this parrakeet, unlike any others of the family, once inhabited almost the entire eastern part of our country with its rigorous climate.

But few additions or alterations were made in other sections of the exhibition collections of zoology. A very large American crocodile and an equally large alligator in metal and glass cases were substituted for the two small specimens in old-fashioned wooden cases. In connection with the invertebrate series the principal change consisted in the removal of the two casts of giant cephalopods, one a squid, the other an octupus, from the Smithsonian building to the west range of the new building. As these specimens had to be taken apart and rebuilt and repainted, the task was one of considerable magnitude.

During the latter part of the year all of the exhibition materials illustrative of the whales then remaining in the older Museum building were transferred to the new building, where their installation in the south hall of the second story of the west wing was immediately begun. Among these specimens, all of which are of large size, were the cast and skeleton of the giant sulphur-bottom whale, which have attracted so much attention.

Explorations.—Without funds for carrying on extensive field work, the department of biology has been dependent upon the cooperation of friends and of collectors and travelers generally, to some of whom outfits are supplied, for the acquisition of new materials from regions not covered by the national surveys. Dr. W. L. Abbott, as in former years, has given most material assistance in this respect.

While not personally conducting any explorations during the past year, he continued to maintain Mr. H. C. Raven in the field, with most important results. After finishing his work in Borneo in July, 1914, Mr. Raven crossed to Celebes, where he conducted a very successful campaign of collecting until his return to this country near the close of the year. The material from Celebes can not fail to be of great value, as this interesting island has been very poorly represented in the Museum.

The collections from the expedition of Mr. John B. Henderson to northwestern Cuba, alluded to in the last report, did not reach the Museum until within the past year. They contain not less than 10,000 specimens, mostly marine invertebrates, but with numerous terrestrial examples. Mr. Henderson again visited Cuba during last year in search of mollusks, in which connection the Museum also profited, as well as by his dredging operations in southern Florida conducted from his yacht *Eolis*.

Various explorations under the Carnegie Institution of Washington have, through the generous attitude of that establishment, resulted in substantial additions to the Museum collections. Foremost among these was the expedition of Dr. J. N. Rose, associate in botany, during the summer and autumn of 1914, to the west coast of South America to secure material for his monograph of the Cactaceae. His work was mainly confined to Peru and Chile, and besides a very large number of cacti, he brought back many specimens of other groups, aggregating in all some 3,000 specimens, which were placed in the National Museum on permanent deposit. With the aid of grants from the Carnegie Institution, Dr. T. Wayland Vaughan, custodian of madreporarian corals, has for some time past undertaken a series of investigations chiefly in the West Indian region relative to the growth of corals, their rôle in reef building and related problems. In pursuance of this work he has made trips to Florida, the Bahamas and other West Indian localities, and has received the assistance of Dr. A. G. Mayer and his staff of collectors at the Tortugas Marine Biological Laboratory. Extensive collections have reached the Museum from this source. Dr. Mayer's own expedition to the Murray Islands in the gulf between North Australia and New Guinea, not far from the eastern entrance to Torres Strait, added about 300 specimens representing some 75 species. In connection with the West Indian researches it was desired to obtain corals and other marine invertebrates from St. Thomas, which had not been visited, and Mr. C. R. Shoemaker, of the Museum staff, was detailed to this duty, at the expense of the Museum, but his departure was delayed until the middle of June. The colonies of *Cerion* mollusks which Dr. Bartsch, under the auspices of the Carnegie Institution, had transplanted from the Bahamas to certain Florida Keys for the

purpose of observing the development of new generations of these shells in a new environment were visited by him for the third time in the latter part of June.

Mr. Arthur de C. Sowerby continued his explorations in Manchuria and northeastern China and forwarded a number of valuable collections of vertebrates and insects. Mr. Copley Amory, jr., collaborator in zoology, joined an expedition to northeastern Siberia, which sailed from Seattle about the end of June, 1914, in the schooner *Eagle*. It was the intention to winter not far from the river Kolyma. General biological collections were to be made, though Mr. Amory expected to pay special attention to mammals. When last heard from, the expedition had reached its destination, but no results have yet been reported. Dr. Fred Baker, of Point Loma, Cal., continued his collecting and exploring work in the Orient throughout the year and sent various interesting contributions, notably a collection of fishes from Formosa.

In August and September, 1914, Mr. Paul C. Standley, of the Museum staff, and Mr. H. C. Bollman, of the Smithsonian Institution, visited northern New Mexico and spent some time camping in the mountains of a little known region at the Brazos Canyon in Rio Arriba County, where they secured about 790 specimens of plants for the Museum, among them a number of species not previously recorded from that State. Mr. James Zetek, of Ancon, Canal Zone, who conducted field investigations for the purpose of obtaining exhibits for a Panama Canal exposition to be held on the Isthmus, presented valuable duplicate material in return for the identification of species.

Government explorations by which the department of biology was benefited were mainly those of the Bureau of Fisheries and of several bureaus of the Department of Agriculture. The commission of three naturalists sent to the Pribilof Islands by the Department of Commerce to study and report on certain questions in the life history of the fur seals brought back a splendid series of the skulls of these animals. The biological survey of San Francisco Bay, which is being conducted by the steamer *Albatross* of the Bureau of Fisheries, is destined to result in collections of vast extent. The greater part of the crustaceans so far collected and sent to the Museum for study aggregate some 9,000 specimens. From a survey of the fishing banks off the coast of Oregon and Washington, by the same steamer, about 800 specimens of miscellaneous invertebrates have been received. Finally the hydrographic and biological explorations in the Gulf of Maine by the steamer *Fishhawk* of the same Bureau, under the direction of Dr. H. B. Bigelow, were productive of a large amount of interesting material mainly from the plankton, including about 275 specimens of Medusæ identified by Dr. Bigelow.

Several botanists of the Bureau of Plant Industry made extensive collections of plants which have been deposited in the Museum. Among these were 1,500 specimens of phanerogams obtained in western States by Mr. W. W. Eggleston, and 675 phanerogams from the same region and western Canada secured by Dr. A. S. Hitchcock.

DEPARTMENT OF GEOLOGY.

The department of geology received 202 accessions, with a total of 134,044 specimens, distributed among the several divisions and sections as follows: Systematic and applied geology, 878; mineralogy and petrology, 3,185; invertebrate paleontology, 129,718; vertebrate paleontology, 196; and paleobotany, 67. The miscellaneous material sent in from various sources for examination and report amounted to 515 lots, of which 282 consisted of minerals, 190 of geological specimens and 43 of fossils. While the Museum is not equipped for making detailed or quantitative analyses, simple determinations generally suffice to decide the character and value of such rocks and minerals as are submitted, and it may be further said that of all of the specimens received in this connection during the year only 30 were of any interest to the department.

Systematic and applied geology.—A collection illustrative of the economic geology of the feldspar deposits of the United States, described by Mr. Edson S. Bastin, and including material suitable for exhibition, was deposited by the Geological Survey. Through the personal solicitation of Mr. Frank L. Hess, of the same Survey, a fine exhibition specimen of ferberite-bearing pegmatite from Arizona was presented by Mr. S. H. Brockunier, of Nevada City, Cal.; two exhibition specimens of tungsten ore, by The Wolf Tongue Mining Co., of Boulder, Colo.; a roscoelite-bearing sandstone from the Primos Chemical Company's mine in San Miguel County, Colo., by Mr. Harold Boericke, of Vanadium, Colo.; and a sample of ferrovanadium, made from the patronite ores of Minasragra, Peru, by The American Vanadium Co., of Pittsburgh, Pa. A contribution from The Georgia Marble Co., of Tate, Ga., consists of four matched slabs of marble, constituting an attractive wall panel; and another from The Evans Marble Co., of Knoxville, Tenn., comprises two matched slabs of the beautiful Roseal marble, which also form an ornamental wall panel.

The meteorite collection was enriched by gift, exchange and purchase. Among the first were a slice of the Willamette iron, weighing 1,954 grams, from Mr. Clarence S. Bement, of Philadelphia, Pa.; a 200-gram slice of the Delegate, New South Wales, iron, from the Department of Mines, Sydney; a 160-gram slice of the Gilgoin stone, from Mr. John C. H. Mingaye, of the same department; and a 145-

gram slice of the Roebourne, Australia, iron, from Mr. Frank L. Hess, of the U. S. Geological Survey. The specimens obtained by exchange consisted of a fine exhibition 998-gram piece of the Tennasilm, Russia, meteoric stone, from Dr. F. Krantz, of Bonn, Germany; fragments of the Manbhoom and Lodhran falls, from the Indian Museum, Calcutta; fragments of the Bethany and Matatiela irons and St. Mark's stone, from the South African Museum, Cape Town; and a 112-gram fragment of the Waconda stone, from Dr. Charles U. Shepard, of Summerville, S. C. The purchases comprised a 201-gram piece of the Ensisheim meteoric stone and a 17-gram piece of that of Hainholz, the former being of unusual interest in that it is a fragment from the oldest known meteoric stone still preserved, the fall having occurred on November 16, 1492. It is further gratifying to note the deposit by the National Academy of Sciences of fragments of 12 meteorites, representing the residues from purchases made in connection with investigations by the head curator of the minor constituents of meteorites, under a grant from the Academy. Twenty of the peculiar glass pebbles found in Australia, assumed by some to be of meteoric origin, but the nature of which has been a puzzle to all writers since the appearance of Darwin's narrative of the voyage of the *Beagle*, were purchased.

All of the material, both metallic and nonmetallic, stored in the attic and in the American cases in the exhibition hall, was carefully examined with the object of verifying localities and mineralogical determinations. It is expected that this work, together with the classified arrangement, can be so perfected that each specimen may be treated as a book in a library, to be quickly located by reference to a card catalogue. Practically the entire series of supposed duplicate material was compared specimen by specimen with the reserve series, with the result that some 675 specimens were transferred from the former to the latter, and the number of duplicates was reduced correspondingly. A large quantity of miscellaneous ores received from the St. Louis exposition in 1904, being the excess above the needs of the division, were broken up, classified and labeled, preparatory to incorporation in educational series. The duplicate folio sets of rocks, described in the last report, were listed and segregated into lots in such a manner as to simplify the work of exchanges. This has involved going over the entire collection of rocks deposited by the Geological Survey, a task of considerable magnitude.

The most systematic investigation of the year related to the meteorite collection, which was thoroughly overhauled and studied in continuation of the work of the head curator, Dr. George P. Merrill, on the minor constituents of meteorites, the results being summed up in a paper to be published by the National Academy of Sciences.

Dr. Merrill also prepared and submitted for publication an illustrated handbook and catalogue of the meteorite collection in the National Museum, in which an attempt has been made to include descriptive matter of value to the student, although presented in such a way as to make it of interest to the general public. A second line of research, one of economic importance and mentioned in the last report, had for its object the determination of the relative solubility in water charged with carbonic acid of some of the most widely used limestones and marbles. Seventy-five samples, including nearly half as many varieties, were tested for periods varying from 70 to 90 days, and the conclusions prepared for publication.

As in previous years, Dr. Merrill was called upon on several occasions for expert advice as to the quality of stone submitted for the construction of Government buildings or of buildings to be erected under Government supervision. The Lincoln Memorial and the Red Cross Building were the principal structures to which his attention was asked during last year.

Mineralogy and petrology.—The most important accession of the year was a bequest from the late Brig. Gen. William H. Forwood, U. S. Army, comprising several hundred specimens of minerals and cut stones, of greatest interest being a suite of unique titanite crystals from an exhausted locality at Bridgewater, Delaware County, Pa. The Geological Survey transferred various lots of gem minerals, in both rough and cut form, selected especially for exhibition by Mr. D. B. Sterrett, honorary custodian of gems and precious stones, and including 4 specimens of turquoise, figured in Dr. J. E. Pogue's monograph on this mineral, recently published by the National Academy of Sciences. Additional specimens from the Survey are also of exceptional value, consisting for the most part of types of new species or restudied and redescribed material from new localities. Among them are a large mass of shattuckite and bisbeeite (new species) from Bisbee, Ariz.; a large crystal of columbite, variety manganotantalite, from San Diego County, Cal.; custerite (new species) from Idaho; cebollite (new species) and an unusually large cleavage specimen of melilite recently discovered in Colorado; the rare mercury minerals montroydite, eglestonite, kleinite, terlinguite and calomel, from Terlingua district, Tex; variscite and lucinite (new species) from Lucin, Utah; ferberite crystals from Colorado; struverite from South Dakota; neptunite from California; fremontite (new species) from Cañon City, Colo.; and vesuvianite, bournonite and prehnite from new localities.

Col. Washington A. Roebling, of Trenton, N. J., contributed one of the largest known nuggets of osmiridium, weighing 40 grams; Mr. Clarence S. Bement, of Philadelphia, Pa., two large crystals of

phenacite and a fine exhibition specimen of the rare mineral tarbuttite; and Mr. Frederick A. Canfield, of Dover, N. J., a sample of the rare mineral roepperite, from Sterling Hill, N. J. Through the influence of Mr. Victor C. Heikes, of the Geological Survey, some interesting pseudomorphs from the Blue Jay Copper Mine and scheelite crystals from the Wilson Bismuth Mine, Utah, were presented by Mr. Harvey Hardy, of Goodsprings, Nev., and Mr. Frank Wilson, of Salt Lake City, Utah. From Dr. William S. Disbrow, of Newark, N. J., were obtained, by gift and in exchange, 10 fine exhibition specimens of minerals from northern New Jersey, and an exceptional lot of large rhodonites from Franklin Furnace in the same State, which are of especial value inasmuch as the locality is no longer accessible to collectors.

The accessions in petrology consisted, as usual, largely of studied material representing folio series, transferred by the Geological Survey. They included minerals and ores from the San Francisco and adjacent districts, Utah; rocks illustrating the geology of the Engineer Mountain and Ouray quadrangles, Colo.; rocks with thin sections from the National district, Nev.; rocks and ores from the Dillon quadrangle, Mont.; rocks and ores from the Jarbridge and Contact mining districts, Nev.; and rocks and ores, with thin sections, from the Hardscrabble mining district, Colo. Type collections from the following districts were also deposited, namely, White Mesa and Bently, Ariz.; Hayden Hill, Winters and High Grade, Cal.; and Miners Basin and Wilson Mesa, Utah.

Mention should also be made of an interesting series of obsidians from Iceland, presented by Dr. F. E. Wright, of the Geophysical Laboratory of the Carnegie Institution of Washington, illustrating his studies on the origin of spherulitic structure. The material is of further value as throwing some possible light on the origin of the peculiar obsidianites from South Australia.

The collections illustrating the radio-active minerals, noted in the last report, were rearranged and many labels added, and several new exhibits were also installed. The type and described specimens in the collection, such as are not desired for exhibition, were brought together in the laboratory of the assistant curator, where they will be more readily accessible for reference. A card catalogue of this type material has been prepared. The duplicate minerals stored in the attic were overhauled and arranged alphabetically in a manner to permit of locating any species without delay.

The assistant curator of mineralogy, Dr. Edgar T. Wherry, devoted some time to a detailed investigation of the oölitic structures as represented in material from Bethlehem, Pa., and also to a study of the possibilities of the microspectroscope in determinative mineralogy. These have been made the subjects of papers, one of which

was published in the Smithsonian Miscellaneous Collections, the other being now in press. The results of other researches have been incorporated in an article entitled "Notes on allophanite, fuchsite and triphylite," to be printed by the Museum.

Invertebrate paleontology.—An extensive and important series of Devonian fossils, representing practically the life-long collecting of Prof. Henry Shaler Williams, was deposited by the Geological Survey. Containing no type or figured specimens, its value rests mainly upon the fact that it includes many faunas heretofore lacking in the Museum collection. Other transfers from the Survey aggregated nearly 600 specimens of type and other monographic material. About 5,000 specimens of European Paleozoic and Mesozoic fossils were received in exchange from the K. K. Naturhistorisches Hofmuseum, Vienna, Austria, and 54 species of Mesozoic sponges, useful for exhibition purposes, from Dr. A. Schrammen, of Hildesheim, Germany. Some 6,000 specimens of Ordovician and Silurian fossils from Illinois, Indiana and Kentucky were purchased. The New York State Museum at Albany, N. Y., through its director, Dr. John M. Clarke, contributed to the exhibition series a large slab containing numerous specimens of the Devonian glass sponge, *Hydnoceras bathense.*

Other important accessions consisted of about 5,000 Cambrian fossils from China transferred by the Smithsonian Institution; and a collection made for the Museum by Dr. Bassler, curator of the division, being the results of his field work in 1914, undertaken mainly to further the preparation of his monograph on early American Tertiary Bryozoa.

The routine work consisted in the preparation and classified storage of new collections, especially those from the Geological Survey and from Secretary Walcott. Two hundred standard drawers of Upper Cambrian fossils from the upper Mississippi Valley and the great collection of Cambrian and pre-Cambrian algae, which have been the subject of investigation by Dr. Walcott for some years past, were overhauled and the materials for further study and illustration carefully selected, the duplicates being set aside for distribution. This work extended also to the Paleozoic collections in general, including the unpacking and arrangement for final study of the Devonian collection from Prof. Henry S. Williams, which required some four months' time on the part of the curator and one assistant to place in suitable museum shape. Several hundred boxes which had been stored for many years were unpacked and the contents systematized and reduced to about one-third their former bulk.

The Ordovician collections, which are very extensive, were consulted by Dr. E. O. Ulrich, associate in paleontology, in connection with his monographic work on the Canadian faunas. Dr. T. W.

Stanton and Mr. T. E. Williard have cared for all the Mesozoic material received. Dr. William H. Dall reports, with reference to the Cenozoic collections, that the work has consisted in indexing and arranging the specimens in new steel cases, and in the preparation of a catalogue of Pacific coast species. Dr. T. W. Vaughan spent much time in the study and arrangement of the Tertiary corals, which are now in fairly good condition. The curator himself devoted some weeks to the preparation of the collection of Tertiary Bryozoa obtained by him in 1914; and Mr. Frank Springer, associate in paleontology, retained supervision of the fossil echinoderms.

Secretary Charles D. Walcott continued his researches on algal and concretionary-like material in the Cambrian limestones, and conducted an investigation of the Appalachian faunas, especially of the Cambrian period, with a view to their correlation. A contribution on this subject is nearly ready for publication. Definite progress was also made in the study of the Cambrian trilobite fauna, which has for several years been under consideration. A work now in hand correlates the results of Dr. Walcott's inquiries for the past ten years and brings the data into comprehensive form for the general reader. Dr. William H. Dall made considerable advancement with the monograph of the Pacific coast Tertiary mollusks and with his studies on the fossil molluscan fauna of Panama, and prepared an account of the fossil mollusks collected by Dr. T. W. Vaughan along the Flint River in Georgia. Mr. Frank Springer reported progress on his monograph on the *Crinoidea flexibilia;* his monograph on the crinoid genus *Scyphocrinus* has been completed but its publication has been delayed pending further field work. Mr. E. O. Ulrich was still occupied with his researches on the Canadian faunas, and the curator of the division, Dr. R. S. Bassler, made good progress on his monograph of the early Tertiary Bryozoa of America. Miss M. J. Rathbun described the Tertiary decapod crustaceans of Panama, comprising 61 species, of which 38 are new to science, 3 representing new genera and 1 a new family; and also the crustaceans of the same group collected by Mr. L. W. Stephenson in the Upper Cretaceous of North Carolina, and the like forms obtained in the Leeward Islands by Dr. Vaughan.

Prof. Charles Schuchert, of Yale University, completed his important work on the fossil starfishes, begun during his connection with the Museum, and it has been published as a Museum bulletin. Dr. T. D. A. Cockerell, of Boulder, Colo., studied the collection of fossil insects from England, on which a report has been submitted. Members of the Carnegie Institution of Washington frequently made use of the collections, while among others who visited the Museum for the same purpose were Miss Julia Gardner, of Johns Hopkins University; Prof. Stuart Weller and Mr. H. E. Wilson, of the

paleontological department of the University of Chicago; Prof. Gilbert Van Ingen, of Princeton University, and graduate students of several universities.

Vertebrate paleontology.—To Mr. John B. Henderson the Museum is greatly indebted for meeting the expense of the final collecting from the cave deposit at Cumberland, Md., described in previous reports. The specimens obtained, recorded as a gift from Mr. Henderson, comprise 15 more or less complete skulls and other fragmental material. Portions of a mastodon from Winamac, Ind., presented by Mr. W. D. Pattison of that place, are exceptionally interesting as Mr. Pattison has given permission to unearth the remaining parts, which, it is expected, will enable the Museum to make a practically complete mount, for exhibition, of a very large specimen. A third important contribution, from Dr. G. R. Wieland, of the Peabody Museum of Yale University, consists of 30 dinosaurian skin plates from the Lance formation of Wyoming, being the largest series of dermal ossifications known from that formation. A number of the specimens have been figured by Dr. Wieland.

A composite skeleton of a dog, and three skulls and lower jaws, from the La Brea asphalt deposits of California, were received in exchange from the University of California. Two purchases of noteworthy material were made. One consisted of vertebræ, skull, lower jaws, and portions of the paddles of the extinct swimming reptile *Mosasaurus*, from the Bearpaw formation of Montana; the other of the upper part of the skull of a rare fossil sirenian from Oregon.

The routine work, other than that of the preparators, consisted largely in systematically arranging and classifying specimens, as they are made ready, in the new steel cases, and while this labor has not yet been brought down to date the collection is now in much better condition than ever before. In the matter of cleaning up the remaining material of the Marsh collection, Mr. Gilmore reports the completion of the preparation of all ceratopsian material from the Upper Cretaceous formations of Wyoming, comprising several skulls and other skeletal remains, including a fairly complete skull of *Triceratops obtusus* Marsh, and portions of the skeleton of *Triceratops calicornis* Marsh. The skull of *Triceratops obtusus* was restored and mounted. The mammalian material prepared, according to Mr. Gidley, consisted chiefly of skulls or jaws of Titanotheres. In all, the contents of 57 boxes from the Marsh collection were disposed of. Unfortunately, in the attempt at an early reduction in the large number of boxes, necessitated by lack of storage space, the materials most easily cleaned were the first to receive attention, and the work now proceeds much more slowly owing to the extreme hardness of the matrix in which most of the bones are embedded, and the fragmental character of the latter.

In addition to the above is to be recorded the restoration and mounting of the skull of *Brachyceratops montanensis*, this difficult piece of work having been well accomplished by Mr. Norman Boss. The type of *Stylemys nebrascensis* and that of *Rutiodon carolinensis* were also mounted, and the preparation of a fairly complete skeleton of *Allosaurus fragilis* was well under way. Among mammals complete skeletons of a fossil peccary, a unique horned rodent, *Epigaulus hatcheri*, and a large Pleistocene dog, *Canis dirus*, were made ready, their final mounting, almost wholly the work of Mr. Thomas Horne, leaving little to be desired. About 100 more or less fragmental specimens from the Cumberland cave deposit were cleaned.

Mr. Charles W. Gilmore, assistant curator in charge of fossil reptiles, completed and submitted for publication by the Geological Survey a paper on *Brachyceratops*, a ceratopsian dinosaur from the Two Medicine formation of Montana. He also contributed on the osteology of *Thescelosaurus*, on the fore limb of *Allosaurus fragilis*, on the genus *Trachodon*, and on a new restoration of *Stegosaurus*. Good progress was made on a monographic study of the carnivorous dinosaurs represented in the Museum, a work which can not, however, be finished for some time.

Mr. James W. Gidley, assistant curator in charge of fossil mammals, continued his work on the Fort Union mammals, which, though previously reported as nearly ready for publication, has been held for revision, in view of further discoveries of material. He likewise began a detailed investigation of the Pleistocene fauna represented in the large collections from the Cumberland cave deposit, to which reference has already been made. Now that the collecting from this deposit has been completed, it is expected that the descriptive work may be brought to an early conclusion. Mr. Gidley, in conjunction with Mr. Gerrit S. Miller, jr., of the division of mammals, spent several months in the study of the fossil and living rodents, which will comprise a revision and reclassification of the entire order.

The results of a revision of the Museum collection of fossil fishes have been embodied in a report by Dr. Charles R. Eastman, submitted for publication. Dr. O. P. Hay, in continuation of his work on the vertebrate life of the North American Pleistocene period, under the auspices of the Carnegie Institution of Washington, has been instrumental in adding to the value of the collections. Among others who consulted or made use of the fossil vertebrate collections were Dr. E. H. Sellards, State Geologist of Florida; Dr. W. J. Holland, director of the Carnegie Museum at Pittsburgh, and Messrs. Arthur and Louis Coggeshall, of the same museum; Mr. C. H. Sternberg, of the Canadian Geological Survey, and Mr. W. E. Cutler, of Calgary, Canada; Prof. Henry T. Osborn, Dr. W. D. Matthew, and Dr. W. K.

Gregory, of the American Museum of Natural History; and Prof. W. B. Scott, of Princeton University.

Paleobotany.—A somewhat fragmental and distorted stump from the Stanley Mine at Sykesville, Pa., fairly satisfactory as an exhibition specimen, was the only addition, worthy of mention, received by this section. The collection of fossil plants is undergoing rearrangement under the three great geological divisions, Paleozoic, Mesozoic and Cenozoic, the intention being to build up a stratigraphic series representing the floras of all the different geological localities, and a biologic series illustrating classification, and containing the type specimens. This work is being carried on under the supervision of Dr. David White, associate curator of paleobotany, and Dr. F. H. Knowlton, custodian of Mesozoic plants.

Dr. Knowlton completed a monograph on the Laramie flora of North America, a work which he has had in progress for some years. Dr. G. R. Wieland, of Yale University, devoted considerable time to the study of the fossil cycads, and Dr. Arthur Hollick, of the New York Botanical Garden, to the Cretaceous and Tertiary floras of Alaska. Dr. E. W. Berry, of Johns Hopkins University, also made extensive use of the collections.

Exhibition collections.—Aside from the occasional insertion of new material in the exhibition series already established, the principal changes in the exhibition halls were as follows: In systematic geology two cases illustrating the characteristic rock and mineral associations of the pegmatites of the eastern United States were installed. In economic geology two heavy granite posts of Minnesota marble, a column of coralline marble from England, and 10 large slabs of native and foreign marbles were added to the building-stone collection. The ore series was increased by one large mass of nickeliferous pyrrhotite with silicate inclosure, from the Gap Mine, at Lancaster, Pa.; two fine samples of Japanese copper ore weighing upward of 200 pounds each; an unusually fine series of tungsten and vanadium ores; a case devoted to illustrations of the genesis of iron ores; and two cases illustrating the occurrence and mineral association of the zinc ores of Sussex County, N. J., and southwestern Missouri.

In the mineral hall seven new flat-top cases were introduced, two of which are devoted to recent accessions, one to newly described minerals, two to the Shepard collection of minerals, one to models of gems of historical interest and artificial gems, and one to gem minerals in the rough with stones cut from the same.

The exhibit of fossil invertebrates was enlarged by one upright case of crinoids representing the fauna of the upper Mississippian formations, a flat-top case of sponges, and two American and one flat-top case in which are illustrated the evolution and classification of the

trilobites. To the vertebrate series were added a mounted skeleton of the horned rodent, *Epigaulus hatcheri;* a fossil peccary from the Cumberland, Md., cave deposit; a large Pleistocene dog from the La Brea asphalt deposits of California; a skull of *Triceratops obtusus* and one of *Brachyceratops montanensis;* an entire case devoted to ceratopsian remains, among which is a partial skull sectioned longitudinally through the center to show the small size of the brain cavity; and the types of *Stylemys nebrascensis* and *Rutiodon carolinensis.*

Explorations.—As in previous years the principal field work carried on had reference to paleontological investigations. Secretary Charles D. Walcott conducted operations during the summer of 1914 at Glacier, British Columbia, and in the region of the Big Elk Mountains of Montana; and in the spring of 1915 he passed a few days examining a newly discovered locality for fossil algal material in Maryland. Mr. Frank Springer's private collector spent four months in collecting fossil echinoderms along the recent excavations of the Erie Canal and at other localities in western New York, and Dr. R. S. Bassler gave two weeks to a study of the Middle Paleozoic rocks of Tennessee, Kentucky, and Ohio. Mr. James W. Gidley completed his field work in connection with the Cumberland, Md., cave deposit, and Mr. Charles W. Gilmore was detailed for three weeks to accompany a Geological Survey party into the region of the Judith River formation along the Missouri River in central Montana. In June, Mr. Gidley began the exhuming of certain mastodon remains near Winamac, Ind., but this work had not been completed at the close of the year.

The head curator, Dr. Merrill, and Dr. Wherry were each in the field for a few weeks but not under the auspices of the Museum. It is interesting to note that arrangements have been made with Dr. W. T. Schaller, of the Geological Survey, who is engaged in a study of the gem-bearing pegmatites of Mesa Grande, Cal., whereby it is expected that the Museum will secure for exhibition purposes a type series of these rocks and their associated minerals. A like arrangement was entered into with Dr. J. E. Pogue, formerly assistant curator of minerals, who left for the field at the very end of the year, to obtain a similar collection from the emerald-bearing pegmatites of Colombia, South America. The Koren expedition into northeastern Siberia, through the instrumentality of which it is hoped to obtain important mammalian remains, has not yet returned and no report of progress has been received.

In this connection, mention may be made of the services of Mr. Victor C. Heikes and Mr. Frank L. Hess, both of the Geological Survey, through whose interest in the Museum, while in the field, a

considerable amount of important material has come into possession of the Museum, as noted under the head of accessions.

ARTS AND INDUSTRIES.

Textiles.—There was an increase over the previous year in the extent and value of the additions to the collection of textiles, which were comprised in 73 accessions. Of woods and of miscellaneous animal and vegetable products, however, there were but few accessions, as, owing to the press of work in other directions, no special effort could be put forth in regard to these subjects.

An important feature secured for the cotton exhibit was a ten-saw Eagle cotton gin, with feeder and condenser, presented by the Continental Gin Co., of Birmingham, Ala., which has been installed in a manner to permit of its being operated and forms the beginning of a series to illustrate the converting of raw cotton into yarn and cloth. The Amoskeag Manufacturing Co., of Manchester, N. H., cooperated on a very generous scale by assembling extensive series of specimens and appliances to demonstrate the manufacture and use of several lines of cotton and wool fabrics. One of these shows the preparation and use of blue chambray, a plain cotton fabric, and includes sections of a number of machines employed in drawing and spinning cotton, a complete Lowell loom with warp and harness in place, samples of cotton fabrics as woven and after finishing, and ready-to-wear garments illustrating the purposes to which the fabrics may be put. Another line of specimens, comprising denim, ticking, shirtings and ginghams, represents the textiles as they come from the loom and after bleaching, and finally made up into finished articles of apparel. The outing flannels in plain colors and yarn-dyed striped patterns are interesting for comparison with the printed cotton flannels received from the Pacific Mills. From the same company were also received a large number of examples to illustrate each step in the manufacture of worsted goods from the raw wool to the finished product, and a supplemental series showing the production of grey worsted suiting by the vigoreaux process. A beautiful United States flag, measuring 7 by 14 feet, of Panama cloth, is a part of the worsted series. A collection contributed by the Worsted Woolen Mill Co., of Worcester, Mass., represents the manufacture of carded woolen fabrics, which comparatively simple process is in striking contrast with the elaborate series of steps necessary in the production of worsteds.

Of two American firms interested in the making of lightweight wash fabrics, especially for men's wear, one, the Goodall Worsted Co., of Sanford, Me., furnished 30 samples of Palm Beach cloth, a fabric woven with a cotton warp and mohair filling; and the other,

the Oscar Hoffman Corporation, of New York, a specimen of silk zephyr suiting made from tussah silk.

In addition to the standard cotton fabrics above referred to, the already extensive collection of cotton dress goods novelties was augmented by many beautiful and seasonable examples contributed by firms in New York and New England. Geo. B. Duren & Sons, of New York, supplied embroidered voiles and dotted muslins; William Anderson & Co., of New York, zephyr ginghams, percales and white goods; the Huron Textile Co., of New York, silk stripe cotton voiles; and the Bates Manufacturing Co., of Lewiston, Me., novelty crêpes in striped and plaid effects. Printed cotton goods from the Merrimack Manufacturing Co., of Lowell, Mass., and the Pacific Mills, of Lawrence, Mass., added new patterns and fabrics to the extensive series of printed and piece-dyed cotton dress goods previously furnished by the latter.

From Marshall Field & Co., of Chicago, Ill., were received printed cotton draperies designed for the fall trade of 1915, besides a number of photographs and half-tone illustrations showing the principal steps in the process of engraving copper rolls for printing such fabrics. The Orinoka Mills, of Philadelphia, Pa., presented a number of beautiful sunfast drapery and upholstery fabrics, and specimens of chenille yarns; while other cotton draperies were the gift of Geo. B. Duren & Sons. Mr. John W. Stephenson, editor of the "Upholsterer," New York City, supplied a collection of small samples of the upholstery fabrics described and figured in his periodical.

Exhibits sufficient in extent to fill several cases, which have been arranged to elucidate the manufacture of the principal kinds of pile fabrics made in the United States, were contributed by the House of Salt's, Inc., and Sidney Blumenthal & Co., Inc., of New York; the Contrexeville Manufacturing Co., of Manville, R. I.; the Hind and Harrison Plush Co., of Clark Mills, N. Y.; and the Massachusetts Mohair Plush Co., of Lowell, Mass. Besides fabrics for dress and decorative uses, these collections include many beautiful examples of artificial furs, fabrics finished to resemble seal, Persian lamb, ponyskin, ermine, perwitzky, etc., and employed for coats, muffs and trimmings.

Many specimens illustrating the life cycle of the common mulberry silkworm, purchased from Mr. T. A. Keleher, of Washington, add to the interest and educational value of the silk section. The collection demonstrating the important steps in the throwing of raw silk was freshened up by gifts from John N. Stearns & Co., of New York, and the Klots Throwing Co., of Fredericksburg, Va., the former, which made the original contribution over 31 years ago, having supplied 12 samples of standard dress silks for comparison. Beautiful

brocaded dress silks for the fall season of 1915, from the Duplan Silk Co., of New York, include wonderful examples of cross-dyeing in brilliant colors, fabrics woven with a silk warp and artificial silk filling.

New printed satins, pongees and tussah silks were added to their already extensive collection by Cheney Brothers, of South Manchester, Conn.; and Jansen & Pretzfeld, of New York, presented samples of trimming silks, including a remarkable example of warp-printed taffeta. New taffeta dress silks in Mexican and Indian designs were received from M. C. Migel & Co., of New York. Satins, crêpes and chiffons, decorated by spray printing in a manner similar to the fine work produced in Lyons, France, were contributed by T. H. McCool & Co., of New York, in cooperation with the Decorus Manufacturing Co., of the same city, from which latter firm, by whom the decorative work was done by means of the airograph or air brush, the first machine of this kind imported into the United States was obtained as a gift. A fine example of Irish hand-woven linen damask tablecloth was furnished by Walpole Brothers, Inc., of New York.

To the Quaker Lace Co., of Philadelphia, Pa., the Museum is indebted for a most instructive series of specimens and photographs showing the manufacture of machine-made laces and lace curtains, including the enlarged colored drafts of the designs on ruled paper. An interesting collection of modern European handmade laces, embracing specimens of the picturesque lace headgear worn by the women of Holland and of southeastern France, was received as a loan from Mrs. M. E. Boyd, of South Hanover, Mass.

Two fine examples of Chinese textiles were deposited. One of these, from Miss Sarah McC. Trescot, of Pendleton, S. C., is a magnificent piece of gold thread embroidery on scarlet silk, depicting the Empress and her two attendant fan bearers. It was purchased in the Imperial Palace at Pekin by her father, William Henry Trescot, one of three commissioners from the United States on a diplomatic mission to the Chinese Government in 1880. The other, from Mrs. Olive B. Myers, of Thurmont, Md., is a brocaded robe made for Emperor Hein Fung and taken from the Yuen-Ming-Yuen, Pekin, by order of the English and French allies, when that palace was destroyed by fire in 1860. The collection of elaborately woven and embroidered textiles was further enriched by several beautiful Cashmere shawls, the gift of Mr. Gracie K. Richards, of Washington.

The division was fortunate in obtaining excellent examples of the work done by one of the most famous early American weavers, consisting of two double-woven blue and white coverlets, made from homespun threads of cotton and wool in 1850 and 1858, respectively, by Sarah La Tourette, of Fountain County, Ind. A white cotton

bedspread, woven in Dinwiddie County, Va., in 1844, by Julia A. Poole from cotton grown, picked, carded and spun by herself, was presented by her daughter, Mrs. Fannie Hamilton, of Petersburg, Va.

The Hardwick and Magee Co., of Philadelphia, contributed a series of specimens demonstrating steps in the manufacture of Wilton rugs; and The Firth Carpet Co., of Firthcliffe, N. Y., samples of seamless Scotch chenille, Axminster and tapestry-Brussels rugs. To The Standard Oil Cloth Co., Inc., of New York, acknowledgments are due for a very complete exhibition of the materials and processes employed in the manufacture of oilcloth and for a large number of specimens demonstrating its numerous uses. This collection includes sketches and photographs illustrating the improved modern methods of production in comparison with the hand methods formerly employed.

The Department of Agriculture deposited a series of 80 samples of raw cotton, No. 22 warp yarn, picker waste and card waste, showing the relative amount of waste thrown out, under normal spinning mill conditions, from each of the five standard full grades of raw upland cotton. This material will be especially valuable as a graphic demonstration of the foreign matter found in commercial raw cotton, and when installed with the set of official cotton grades now in the Museum will serve to point out one of the principal factors in determining the grade.

A large number of rolls or coils exhibiting the cutting and winding of many different kinds of textile fabrics adapted for special purposes were presented by the Cameron Machine Co., of Brooklyn, N. Y. They include such materials as surgeon's plaster, bandages, absorbent cotton, insulating fabric for electric conduits, emery cloth, bias bindings for shoe manufacture, gummed cloth, paper for box making, etc.

The already commanding position in the popular interest which the National Museum has attained by reason of its possession of so many of the very first beginnings of important inventions is continually being strengthened by the accession of original models and the earliest machines used in important industries. A group of such appliances, employed in the manufacture of embroideries, was presented last year by The Kursheedt Manufacturing Co., of New York, through the public-spiritedness of its secretary and general manager, Mr. Richard Bloch, and it should be a source of pride to Americans that these valuable improvements were conceived and perfected in this country. The gift comprises the first working model of the Groebli automat, which was the first embroidery Jacquard used in America for operating the Schiffli embroidering machine; the earliest model of each of three successive improvements thereon; and likewise the first punching machine used for perforating the paper

pattern roll used in operating the three later models. All of these were devised by J. A. Groebli, son of Isaac Groebli, the inventor of the Schiffli machine, and were developed and built in the shops of The Kursheedt Manufacturing Co. By means of the automat the movements of the fabric frame of the embroidering machine are controlled mechanically, thereby dispensing with the pantograph operator and insuring greater speed, accuracy and uniformity in the work.

Of accessions other than textiles received during the year, the more important were a set of specimens illustrating the manufacture of featherbone from turkey feathers, contributed by The Warren Featherbone Co., of Three Oaks, Mich., to replace material supplied by the same firm in 1884; a collection of ostrich plumes from the Cawston Ostrich Farm, of South Pasadena, Cal., forming a valuable addition to the exhibit of feathers and feather work and embracing every grade of raw, bleached and dyed feathers, as well as a beautiful Knight Templar's plume; two beautifully carved mother-of-pearl shells, on which are depicted the Last Supper and the Crucifixion, lent by the Misses Long, of Washington; and specimens of oak and spruce phonograph horns in intermediate and finished stages, presented by Sheip & Vandegrift, of Philadelphia, Pa.

The collection of identified woods from Panama and the Canal Zone was increased by 18 specimens obtained for the Museum by Mr. H. Pittier, of Washington.

The cotton exhibits in the south hall were entirely rearranged to permit of the addition of new material and to provide a more balanced installation of the principal classes of these goods. The Lowell cotton loom, in a case specially provided for it, was installed on the west side of the hall near the drawing and spinning frames contained in the western wall case. In the corresponding but larger wall case on the east side of the hall were added 12 large pieces of textile machinery besides a number of spinning wheels and reels and numerous small models. One section of the case has been utilized for the hand-operated textile machines and appliances belonging to the colonial period of the country, while the back of the case has been hung with hand-woven coverlets and curtains. In the same hall the commercial wool fleeces have been very compactly arranged by constructing within the single case employed tiers of pigeon holes, 12 inches square and 40 in number.

Two special series of fabrics have been added to the installation in the east south range, one representing fabrics having a nap or pile, formed by means of a special set of threads and including velvets, plushes, corduroys and fur fabrics; the other composed of fabrics presenting a crêpe-like, wrinkled or roughened surface, produced either in the weaving or finishing, including crêpes, ratines, seer-

suckers, plissés, etc. The removal toward the latter part of the year of the whale skeletons which had remained suspended there since the transfer of the zoological collections has greatly improved the appearance of this range, but the necessity for certain other changes delayed the systematic placing of the floor cases, though the arrangements in the wall cases on the north and west sides of the range, with the exception of two panels, was completed.

Owing to the shortage of appropriate cases it was not possible to immediately install all of the material received for exhibition during the year, but an attempt was made to promptly display all specimens of fabrics sent to the Museum previous to their entry into the retail trade, or such as are likely to be of interest to visitors for a very limited period. Group labels for the exhibition cases have been added as rapidly as the curator could prepare copy, and this was nearly finished for the south hall.

All new specimens have been catalogued practically as soon as received, though the catalogue is as yet confined to the one set of original cards. The arrangement of the reference collection of named fabrics, mounted on letter-size cards and filed in regular filing cases, is progressing steadily. The acquisition by the division of the wide space back of the east wall case in the south hall has furnished additional and much needed room for both permanent and temporary storage, and the systematic arrangement of the material there assigned is well under way. All materials subject to attack by insect pests were successfully protected from injury, but it is important to note the timely discovery of *Dermestes* on the silkworm cocoons, and of the cigarette beetle (*Lasioderma serricorne*) on the specimens of vegetable ivory.

A large part of the important accessions of the year resulted from three visits by the curator of the division made for the purpose of securing material as well as for obtaining information for use in labeling, cataloguing and installing specimens. One of these was to Paterson, N. J., another to Willimantic, Conn., and the third to New York City. An investigation of the history of several automatic attachments for embroidering machines, conducted near the close of the year, rendered necessary a trip to New York City and Camden, N. J., to observe the machines in operation and to interview the men concerned in their invention and building. Requests for information regarding silk violin strings led to a microscopic study of the construction and mechanical analyses of such articles and the undertaking of their manufacture by one of the Museum correspondents.

Continued progress has been made in the compilation of terms and definitions for the textile glossary begun in 1913, which has already proved very useful in cataloguing new materials as received.

Further studies on the botany of the cottons and related plants by the curator, Mr. F. L. Lewton, resulted in the publication of a technical paper on the so-called Australian cottons, which is cited in the bibliography.

A special exhibition of living silkworms, feeding on mulberry leaves and forming their cocoons, was held in one of the large halls, having for its object the instruction of the public and the preparation of a new exhibit for the silk section. It was continued during a month and attracted much attention. Many groups of children from the public and private schools of the city were given talks on the textile collections. Several classes from the National School of Domestic Arts and Science in Washington also came to the Museum at regular intervals during the winter and spring months for lectures and demonstrations on the principles of spinning and weaving by the curator, who likewise arranged a lecture demonstration for a class of 20 young ladies from the National Park Seminary at Forest Glen, Md.

The plans suggested for the building up of the textile collections, as outlined in the last two reports, are being carried out in the main. Among matters to which early attention is proposed are the following: The illustration of the historical and industrial development of spinning, winding and weaving by means of models; the installation of certain important and fundamental devices used in the textile industry, such as the Jacquard machine, silk reeling apparatus, small embroidering machine, circular knitting machine, bobbin winding machine, warp drawing and tying machine; means for operating, in public view, the cotton gin, loom, silk reel, spinning frame and other important textile appliances; the processes of manufacture, dyeing and use of artificial silk; the assembling of a comprehensive exhibit of modern laces, including the best examples of machine-made laces with corresponding types of handwork, and the increase of the collection of colonial fabrics and textile appliances; photographic enlargements of photo-micrographs of the standard weaves and of pictures bearing on the collections, such as cotton picking, sheep grazing and shearing, ostriches on range, feather plucking, etc. It is also designed, as duplicates accumulate, to begin the preparation of sets of specimens illustrating textile raw material, spinning, weaving and standard fabrics for the use of technical schools, whereby the teaching of industrial subjects may be generally aided in accordance with the practice so long followed in connection with the natural history collections.

With respect to miscellaneous animal and vegetable products, it is intended to give special consideration in the near future to the illustration on a comprehensive scale of leather working and shoemaking, and of commercial furs and skins, the latter combining a comparison

of genuine furs with the common cheap kinds; and the development and enlargement of the collection of vegetable products along lines to represent important industrial processes, such as flour milling, starch and glucose manufacture, soap and candle making, painting and varnish making, hard rubber, elastic goods and tires, sugar refining, etc.

It was not until near the close of the year that an opportunity was presented for organized activities in the matter of commercial woods, their utilization and the means to that end. The subject was first recognized in the Museum classification about 30 years ago, under the designation of forestry, but no permanent results followed though small accessions were received from time to time. The greater part of these acquisitions unfortunately proved valueless since they were not collected in accordance with any plan, and most of the specimens were without labels. There have been frequent calls upon the Museum in recent years for the formation of such a collection, which shall be thoroughly comprehensive and practical, and it was on this basis that a section of wood technology was established in June, with an assistant curator directly in charge, under the supervision of the curator of textiles.

Mineral technology.—The activities of this division, the objects of which were discussed in the last report, have extended through only two years, but the results already obtained have entirely exceeded expectations. The main purpose of the division being educational, its collections will be chiefly on exhibition, and to this purpose have been allotted four halls in the southwestern part of the older Museum building. While this area is recognized as inadequate for a full and proper exposition of the industries to be represented, the plans for the immediate future contemplate its division in due proportion between them, and the use of all of it. It is not designed to duplicate in any respect the collections of natural mineral resources, which are already provided for in the department of geology, but to illustrate the industries in which the more important of these mineral products figure. Minerals as such will, therefore, be entirely subordinated to the demonstration of their extraction from the ground, of the processes leading to their utilization, and of the finished products.

Such a collection cannot be assembled hastily, since in bulk it will consist mainly of models which must be constructed, though greatly reduced in scale, with a faithful attention to details, whether it be a mine or a manufacturing establishment that is represented. The organization of a division with these objects in view has not only met with favorable commendation from the mining interests, but has equally received their aid and cooperation to such an extent that the success of the project is only a question of the time required for

making the models and gathering the products. The character of exhibit for each of the mineral classes was worked out in advance, so far as that was possible, and the position and amount of space available for each was at least approximately determined. The definite plans have followed in such order as the circumstances warranted, and have been given consideration in conjunction with the leading mining and manufacturing companies on whom dependence must be had for their realization. Several companies have already contributed models, while others have furnished designs and descriptions as a basis for their construction in the workshop of the division, and all who have so far lent their assistance have generously supplied other materials needed for the exhibits. It is not to be understood that the work has been advanced to the extent of giving even an appreciable appearance of completeness to any of the halls, except that devoted to the subject of coal, but very much was accomplished during last year, and the plans that have been formulated will henceforward be more in evidence through more frequent additions to the collections in the immediate and near future.

Any original investigations that might be instituted have been deferred, pending the accomplishment of the main purpose of the division, but a careful study of each industry as to its historic and current phases has preceded the planning of each exhibit, with the twofold objective of making the exhibit adequately representative and of incorporating in a series of bulletins the features brought out in the series. The plans for the development of the division are, in one direction, embodied in the exhibits already installed, and broadly considered involve for each industry: First, a representation of the industry in the form of models, reproducing in miniature the original occurrence of the mineral substance treated, and the general procedure followed in extracting it from the earth and preparing it for its various uses; second, a systematic series of specimens exemplifying the natural occurrence, the various stages passed through in the course of the processes shown in the model reproduction, and the range of industrial products, together with their adaptabilities; and third, the issuance of brief educational bulletins with illustrations taken from the models and text from the labels, for the use of schools and for the purpose of extending the advantages of the exhibit to the great body of the public unable to visit the collections.

Public opinion of mining and metallurgical engineering, which is not of the best, is largely influenced by the shortcomings of an individual and fails to realize to what extent general prosperity and comfort is dependent upon the results of these professions. It does not appreciate the enormity of the obstacles overcome in the paths, for instance, between the coal seam and the household cellar, nor whether it is paying enormously high or exorbitantly little for each

ton of coal that it buys. The Museum may therefore make a most important contribution by enabling the public to appreciate its indebtedness to the genius of great mining and metallurgical enterprise.

The total number of accessions for the year amounted to 53. The more important of these, with some reference to the progress made in connection with other noteworthy exhibits soon to be completed, are as follows:

Two exhibits relating to salt have been prepared but only one of these has so far reached the Museum. This illustrates the occurrence, mining and treatment of rock salt for the manufacture of sodium compounds, as followed by the Solvay Process Co., of Syracuse, N. Y. It consists primarily of a model made from drawings furnished by the company, covering a narrow strip of country lying between the Tully Lakes region, where the salt wells are located, and Solvay, a suburb of Syracuse. In plan the model shows one of the Tully Lakes which supplies water to the salt wells, a few of the brine wells, a limestone quarry, the product from which is used in the soda works, an outlying portion of Syracuse, and the soda works at Solvay. A very realistic effect, appealing to the technical as well as the nontechnical mind, is produced by using actual water running into the lake, the overflow forming a creek extending the entire length of the model. In section the model represents the position of strata underlying that section of country, including a salt bed which is being mined at Tully. Eight photographic enlargements, depicting scenes along the route, are hung in proper relative positions above the model, while on the floor in front of the model samples of the raw ingredients employed in the process and the finished products obtained are displayed in their correct order. These were a gift from the Solvay Process Co. The second of the salt exhibits referred to is a model demonstration of the occurrence, extraction and refining of table salt, constructed in collaboration with the Worcester Salt Co., of New York City. It is at present on exhibition at the Panama-Pacific Exposition, at the close of which, through the courtesy of the company, it will be transferred to the Museum.

An exposition of the processes of glass making has for some time been in course of development in cooperation with the Macbeth-Evans Glass Co., of Pittsburgh, Pa., following plans evolved in collaboration with Mr. George A. Macbeth, president of the company. The exhibit aims to reproduce, on a scale of about 1/24 natural size, the most modern glass works furnace equipment with a complement of workers engaged in the performance of the various typical attendant operations, the whole technically complete and accurate in all details, but so arranged as to be readily comprehensible. It will also show the ingredients, the parts they play, and the manner in which they combine as a whole to form glass. Models of

the two standard types of furnace in current use were contributed in 1914. The additions during last year comprised models of a glass annealing furnace, a glass-melting clay pot, and the various tools used by glass blowers, together with many specimens designed to illustrate the art of glass making, including segments of the glass rings used in the construction of lighthouse lenses, a series of colored railroad lantern globes and bull's eyes for both hand lanterns and signals, and many styles of electric and gas lamp shades employed in both direct and indirect lighting effects. This entire exhibit has been made expressly for and is a generous donation to the Museum by the Macbeth-Evans Co., through the friendly offices of its president. There is but little more required to render it complete.

As the central theme of an exhibit designed to acquaint the public with a widely used but as yet little known building material, a model has been constructed by the Museum, on a scale of 1 in 48, of the gypsum plant of the United States Gypsum Co., of Chicago, Ill., located at Oakfield, N. Y. It is based upon drawings from the company, and, while showing the underground conditions in the mine and the methods of ore extraction, its most significant feature is the clear comprehension it imparts of the manufacturing process employed by one of the largest, if not the largest, gypsum manufacturing companies in the country. All machines and appliances of importance are represented in their relative positions in the buildings of the plant, so that the visitor, by walking around the model, may obtain a full understanding of the methods.

A series of specimens of crude mica and its products, with illustrations of the manufacture of mica plate, a process by which mica that was formerly thrown away as waste can be utilized, was contributed by the Keene Mica Products Co., of Keene, N. H. This accession, in connection with that received the previous year from the Westinghouse Electric Manufacturing Co., constitutes an industrial exhibit summarizing the occurrence, technology and uses of mica.

To the collection designed to show the occurrence, derivation and adaptability of the known abrading materials, both natural and artificial, there were 5 accessions, all gifts, as follows: From the Pike Manufacturing Co., of Pike, N. H., a series of photographs and specimens illustrating the mining and treatment of the well known Arkansas novaculite sandstone used for whetstones, and of the New England mica schists employed for scythestones, etc. From the Carborundum Co., of Niagara Falls, N. Y., a model of a carborundum electric furnace, together with a set of specimens, showing the process of manufacturing the artificial abrasives carborundum and aloxite, and their industrial uses. From the Norton Co., of Worcester, Mass., photographs and specimens representing the manu-

facture and uses of the artificial abrasives crystolon and alundum. From the Pittsburgh Crushed Steel Co., a series of crushed steel products employed for abrading purposes. From the American Tripoli Co., of Seneca, Mo., examples of tripoli and tripoli products.

A very remarkable specimen of asbestos rock, weighing 550 pounds and showing the typical vein occurrence of asbestos fibre, forms part of a series which includes the several grades of carded asbestos fibre, presented by the Asbestos Corporation of Canada, Ltd., Montreal, Canada. Two other donations in this line consist of asbestos products from the Sall Mountain Co., of Chicago, Ill.; and of the same, with illustrations of the steps in the process of their manufacture, from the Asbestos Protected Metal Co., of Beaver Falls, Pa.

Among the additions to the coal series was a very complete set of photographs representing actual scenes in and around the by-product coke plant of the United States Steel Corporation's works at Gary, Ind., drawings of which had been used for a model of such a plant installed the previous year. A further contribution consisted of a series of specimens of the many by-products derived in coking 1/10 of a ton of coal, showing the exact amount of each obtained, which was presented by the Semet-Solvay Co., of Syracuse, N. Y. These several exhibits, which are grouped together, impart to the Museum visitor, in a very clear and concise manner, a knowledge of one of the most important industries of the world.

The division is attempting an industrial classification of the coals of the world, and has thus far met with excellent results through cooperation with the many coal mining companies in the United States whose products are of distinct types. Each company so far approached has presented a sample block of its coal, together with a description of the same, giving its analysis, uses and markets, which is used as the basis of a descriptive label containing information valuable to the public.

A very complete series representing the manufacture of graphite and its industrial products, the gift of the International-Acheson Graphite Co., of Niagara Falls, N. Y., by reason of its compact arrangement and comprehensiveness, has been selected as the standard for one of the four types of exhibition methods to be followed by the division. Another exhibit of graphite, designed to demonstrate the native occurrence of this mineral, its mining, treatment, and uses, including the process of manufacturing lead pencils, was nearly ready for installation at the close of the year. Its preparation was undertaken in cooperation with the Joseph Dixon Crucible Co., of Jersey City, under the direction of Mr. Malcolm McNaughton.

A systematic exhibit, which will summarize current knowledge regarding the use of asphalt, at present under construction as a gift by the Barber Asphalt Paving Co., of Philadelphia, Pa., will repro-

duce in models the occurrence and technology of asphalt, including a very remarkable model of the famous Pitch Lake on the Island of Trinidad. Another exhibit, in course of preparation by the National Lead Co., of New York City, and soon to be completed, will represent by means of models the occurrence and mining of lead ore, as well as the processes involved in the smelting of this ore to obtain pig lead, and in the manufacture of white lead, etc., from pig lead. Models illustrating the occurrence, mining and preparation of zinc ore and the manufacture of metallurgical products typical of the industry, developing also the historical features together with the part played by zinc in domestic economy, are being constructed under the supervision of Mr. George C. Stone, as a donation from the New Jersey Zinc Co.

In cooperation with the United States Steel Corporation, the division has under consideration plans for an exhibition covering the occurrence, mining and milling of iron ore and the metallurgical practices employed in the manufacture of iron and steel, which it is expected will surpass any in the world for comprehensiveness and details. The systematic series, in course of development to illustrate in model form the general methods of ore extraction, is to receive from the Geological Survey at the close of the Panama-Pacific Exposition two excellent models showing both deep and shallow placer mining methods as practiced in Alaska. Two model exhibits under construction at the close of the year, from designs by the division, will illustrate, respectively, the occurrence, extraction and refining of oil and gas, and an occurrence of natural sulphur and the method of extracting it, as followed by two companies in this country. Another exhibit, planned for early construction, will demonstrate an occurrence of limestone, its quarrying and treatment in the manufacture of Portland cement.

DISTRIBUTION AND EXCHANGE OF SPECIMENS.

The distribution of material to schools and colleges for teaching purposes aggregated 14,843 duplicate specimens, accurately classified and labeled, of which 10,774 were in series regularly prepared for this purpose, as follows, namely: 64 sets of minerals and ores of 83 to 86 specimens each; 9 sets of rocks, minerals and ores of 72 to 74 specimens each; 21 sets of fossil invertebrates of 42 to 54 specimens each; and 21 sets of mollusks of 174 specimens each. The remaining 4,069 specimens were contained in 48 sets prepared to meet special requirements and represented the subjects of ethnology and archeology, mammals, birds, fishes, insects, marine invertebrates, rocks, ores, minerals and fossils. In making exchanges 7,927 duplicate specimens were used, of which 1,286 were anthropological, 907 zoological, 5,008 botanical and 726 geological, including fossils.

One hundred and eighty-eight lots of specimens were sent for study to collaborators of the Museum and to specialists engaged in research work for other institutions. They comprised a total of 10,269 specimens, of which 50 were mammals, 636 birds, 136 reptiles and batrachians, 37 fishes, 2,663 insects, 1,401 marine invertebrates, 4,070 plants, 118 minerals, rocks and ores, and 1,158 fossils. This material was all to be returned to the Museum, and some had been received before the close of the year.

NATIONAL GALLERY OF ART.

The past year was a prosperous one for the Gallery of Art in several ways. Mr. Charles L. Freer, of Detroit, Mich., made a notable addition to his already wonderful collection, consisting chiefly of oriental paintings, pottery, jade, bronzes, etc., with a few works by American artists. Outside of this contribution and one by Mr. William T. Evans, of New York, however, but few permanent additions were received, nor can much be expected in this direction until better accommodations are provided for the Gallery, which is now mainly restricted within improvised screen enclosures in a hall designed and required for another purpose. There is no doubt, however, that the interest of the public has been generally awakened to the importance of this branch of the establishment, specifically authorized and directed in the fundamental act of 1846, and, though actually organized only nine years ago, it has already become an acknowledged factor in matters of art in this country. Its right to a more generous support from the Government seems, therefore, undeniable, and, with proper equipment, it may expect liberal favors from those in a position to assist; but, even as it is, the Gallery is doing excellent work, as is recognized the world over, and its progress, based on solid achievement, has gone too far to be checked.

There were an exceptional number of loans during the year, several of large size, and one composing a special exhibition by a national association. The paintings, of which the loans mainly consisted, were all worthy of representation in the national collection, and included many by old masters and by eminent painters of later periods. To the generous owners of these and of the sculptures thus temporarily placed on exhibition the public is greatly indebted, while the Gallery is much flattered by the faith shown in its objects and activities.

The Advisory Committee on the Gallery retains the same membership as for several years past, consisting of Mr. C. Y. Turner, of Baltimore and Washington, chairman; Mr. Frederick Crowninshield, Mr. Edwin H. Blashfield and Mr. Herbert Adams, all of New York City; and Mr. William H. Holmes, secretary. Mr. Holmes,

who is the head curator of anthropology in the National Museum, also serves as curator of the Gallery. The enclosure constructed for the Gallery some years ago is adapted only for paintings, offering no space for works of sculpture, of which the few pieces now in the possession of the Gallery are exhibited in the north entrance lobby and the rotunda. Arrangements for the special exhibition and for the changes in and additions to the loan collections have entailed a considerable amount of planning and labor, but with excellent results, and at the close of the year the Gallery presented a greater assemblage of attractions and a better appearance than at any previous time.

The additions by Mr. Charles L. Freer to his splendid gift consisted of 110 objects assembled between February 24, 1914, and January 11, 1915, title to which was given on the latter date. Of American works there were 8, namely, 1 oil painting by Dwight W. Tryon, 1 oil painting and 2 silver points by Thomas W. Dewing, and 3 drawings and sketches and 1 lithograph by James McNeill Whistler. The oriental part, aggregating 102 examples, comprised 50 paintings, of which 8 panels, 14 kakemono, 10 makimono and an album of 11 paintings are Chinese, and 1 screen, 1 panel and 5 kakemono are Japanese; 14 pieces of pottery, of which 12 are Chinese, and 1 each Rakka and Raghes; and 24 pieces of jade, 5 sculptures in stone, and 9 bronzes, all Chinese. The original donation by Mr. Freer, numbering approximately 2,326 objects, was conveyed to the Smithsonian Institution by a deed of gift dated May 5, 1906, in which it was provided that the collection should remain in the possession of the donor during his life and that he might make such appropriate additions to it as he should select. Such additions have, in fact, been made on a most extensive scale, and have from time to time been formally transferred by supplemental deeds of gift, which now number 6 in all. So liberal indeed has been this benefactor that he has more than doubled the size of his contribution, which now contains approximately 4,811 pieces, of which 991 are American and 3,820 oriental. A summary of the collection as at present constituted will be found on a subsequent page.

The other permanent acquisitions, all donations, numbered 12, of which 7 are oil paintings, 1 is a marble statue, 2 are busts in bronze and 2 plaster casts. The principal contributor was Mr. William T. Evans, whose interest in the welfare of the Gallery has shown no abatement since his original gift in 1907. The collection of the works of contemporary American artists, which he has augmented from year to year, now comprises 151 paintings and 1 bronze by 107 persons, besides 115 proofs of wood engravings by 16 of the most prominent American workers in this line. His donations of last

year, 5 in number, and with one exception consisting of oil paintings, were as follows:

H. Hobart Nichols. Moonrise at Ogunquit.

Henry Oliver Walker. Portrait of Mrs. William T. Evans and Son.

Wyatt Eaton (1849–1896). Portrait of William T. Evans.

J. Alden Weir. Portrait of Wyatt Eaton.

J. Scott Hartley (1845–1912). Bronze portrait bust, inscribed "William Thomas Evans MCMIV."

The following were the other gifts:

Samuel Isham (1855–1914). Wooded landscape. Oil painting. Received from the estate of the artist in accordance with his wishes, through Mrs. Julia Isham Taylor, executrix.

Elizabeth Nourse. Fisher Girl of Picardy. Oil painting. Presented by Mrs. Elizabeth C. Pilling, of Washington, in memory of her husband, the late John Walter Pilling.

Alfredo Helsby. Full Moon, a landscape at Limache, Chile. Oil painting. Presented by the Embassy of Chile at Washington, through Señor Don Eduardo Suarez-Mujica, Ambassador.

Paul W. Bartlett. Original plaster model of the bronze equestrian statue of Lafayette erected in the Square of the Louvre, Paris, France, in 1900, as a testimonial from the school children of the United States. Gift of the artist.

Henry Hudson Kitson. Bronze bust of the Right Honorable, the Viscount Bryce, O. M., Ambassador of Great Britain to the United States, 1907–1913. Gift of the artist, by whom it was modeled expressly for the Gallery.

Vinnie Ream Hoxie (1847–1914). Full-length statue of the goddess Sappho, in white marble, typifying the Muse of Poetry, modeled between 1865 and 1870. Gift of Brig. Gen. Richard L. Hoxie, U. S. Army (retired).

William Rimmer (1821–1879). Original cast in plaster of the statue of The Falling Gladiator. Gift of Miss Caroline Hunt Rimmer, of Lexington, Mass., daughter of the sculptor.

The loans to the Gallery, received from 14 sources, aggregated 121 paintings, 2 bronzes and 2 plaster casts, a total of 125 pieces; and as the number withdrawn amounted to only 67 pieces, there was a net increase in the loan collections at the close of the year of 58 examples. As a complete list of the loans exhibited during the year is given further on, the year's temporary acquisitions will be only briefly referred to in this connection.

The special loan of which mention has already been made was an exhibition of 27 portraits, representing 23 artists, from the National Association of Portrait Painters, which continued from March 6 to April 7, 1915, and of which a special view, by invitation, was held

on the evening of the opening day. Besides the Gallery catalogue an elaborately illustrated catalogue was issued by the association. This was the second exhibition here by this society, the previous one having been held the preceding year.

A collection of paintings by leading contemporary artists of the United States and Europe, selected in June, 1914, from the international exhibition which had been held at the Carnegie Institute, Pittsburgh, Pa., was shown during the year under the auspices of The American Federation of Arts, at museums in ten different cities in this country. The circuit closed early in June, 1915, and, while the American paintings were immediately returned to their owners, those from abroad, in view of the peril of ocean transportation were, with the consent of the artists, deposited in the National Gallery for a period of six months. These foreign paintings, 23 in number, add most interestingly to the loan series, especially as a number of the painters have never been represented in Washington before.

Mr. Ralph Cross Johnson, of Washington, added 13 important paintings by foreign artists to his notable collection which has been in the Gallery for several years and which is now increased to 24 canvases. Mr. W. A. Slater, of Washington, who reclaimed his former loan of 19 valuable paintings on November 7, 1914, returned it to the Gallery in April and May, 1915, together with 4 additional examples. From Mrs. Edward Kemeys, of Washington, were received 21 paintings, comprising 6 portraits, 5 landscapes and 10 representations of animal subjects, besides 2 bronzes and 2 plaster casts. The other loans, consisting entirely of paintings, numbered 4 from the Rev. F. Ward Denys, of Washington; 3 from Mrs. George W. Vanderbilt, of Washington; and 1 each from Mr. John S. Beck; Mr. W. B. P. Closson, of Newton, Mass.; Mr. W. A. Dickey, of Seattle, Wash., and others; Mrs. Mary F. C. Goldsborough and Mrs. C. V. Purdy, of Washington; Mr. George Treat, of Valdez, Alaska; and a friend of the Gallery, whose name was not disclosed.

Three of the paintings of the exhibition of the works of William F. Halsall, held the previous year, remained in the Gallery until in February, 1915, when they were removed. These consisted of "Our Glory—Battleship Oregon," "The Ocean Rover" and "Like a Sheeted Ghost." The first mentioned was sent to the Panama-Pacific International Exposition.

The beautiful bronze double doors executed by the late Louis Amateis, of Washington, for the west entrance of the Capitol, were, in 1914, pending provision by Congress for their placing, temporarily deposited in the Museum, where they were installed early in the year, with appropriate base and molding, in the north vestibule of the new building opposite the bronze tablet commemorative of the participation of Kit Carson and Gen. Edward F. Beale in an import-

ant episode in the War with Mexico. Following is a brief description of these doors, which are elaborately covered with reliefs, both allegorical and of men prominent in American history:

These doors were designed and modeled by Prof. Louis Amateis, of Washington, and were cast in New York by the Roman Bronze Company and John Williams, Inc. The work consists of a transom and two doors with an ornamental frame, all of bronze. It is 7 feet 8½ inches wide, and 13 feet 10 inches high. The doors themselves are 7 feet 8½ inches wide, and 9 feet 6 inches high. In the transom panel the sculptor has introduced a composition entitled "Apotheosis of America." It represents America seated in a chariot drawn by lions—typical of strength—led by a child, signifying the superiority of the intellectual over brute force. At the sides of the chariot are figures representing Education, Architecture, Literature, Painting, Music, Sculpture, Mining, Commerce, and Industry. At the right of the transom panel stands Thomas Jefferson, third President of the United States, and at the left Benjamin Franklin, inventor and statesman. The medallions at the four corners of the panel represent George Peabody, founder of educational institutions, Ralph Waldo Emerson, philosopher and thinker, Horace Mann, educator, and Johns Hopkins, philanthropist.

In the eight panels of the doors are scenes depicting Jurisprudence, Science, Fine Arts, Mining, Agriculture, Iron and Electricity, Engineering, and Naval Architecture and Commerce.

Jurisprudence is represented in the upper panel at the left by a composition showing a meeting of the Supreme Court of the United States, presided over by Chief Justice John Marshall. A bust of Washington is shown over the chair of the Chief Justice, and statuettes at the right and left represent James Madison and Daniel Webster. Above are medallions of Patrick Henry, Chief Justice Roger B. Taney, and Rufus Choate.

In the Science panel below is a group of the world's greatest scientific workers, from the Greek astronomer, Hipparchus, inventor of the planiscope, down to Charles Darwin. At the sides are figures of Oliver Wolcott Gibbs, chemist, and Joseph Henry, physicist. The medallions are of James D. Dana, geologist, Simon Newcomb, astronomer, Alexander Graham Bell, of the telephone, and Samuel F. B. Morse, of the telegraph.

On the third panel, the Fine Arts are represented by a group in which are Homer, Virgil, Dante, Shakespeare, Goethe, Hugo, Palestrina, Beethoven, and Rossini. Above them is a flying figure of Genius. The statuettes at the sides are of Edgar Allen Poe, writer, and William Thornton, architect of the original Capitol. The medallions represent Gilbert Stuart, painter, and H. K. Brown, sculptor.

Mining is represented by a scene in a mine. On one side of this panel stands James W. Marshall, discoverer of gold in California, and on the other, Alexander L. Holley, metallurgist. The medallions represent E. B. Case, Clarence King, geologist, and Abram S. Hewitt, statesman.

The top panel on the right side of the door shows a harvest scene, typical of Agriculture. At one side is Samuel G. Morton, ethnologist, and at the other James Wilson, agriculturist. The medallions represent J. P. Norton and Benjamin Bussey, agricultural chemists, and Justin S. Morrill, U. S. Senator.

The Iron and Electricity panel depicts a scene in which iron and electric workers are shown. Peter Cooper, philanthropist, stands at one side of this panel and H. A. Rowland, physicist, at the other. The medallions show

Matthias W. Baldwin, founder of locomotive works, and Thomas A. Edison, inventor.

In the engineering scene, workers are shown laying tracks for a railroad. In the background is a long iron bridge. James B. Eads, builder of the St. Louis bridge, stands at the left, and Thomas L. Casey, engineer, at the right. One medallion represents Washington A. Roebling, builder of the Brooklyn bridge, and another Stevens, builder of transcontinental railroads.

Naval Architecture and Commerce are represented by a figure typifying Architecture, showing to Commerce, Industry and Agriculture on a globe held by a youth, the places where they can dispose of their wares. A sailor is represented holding a flag surmounted by a liberty cap, significant of an open-door policy. At one side of this panel stands Robert Fulton, inventor of the steamboat, and on the other John Ericsson, inventor of the Monitor. The medallions are of Eli Whitney, inventor of the cotton gin, John C. Fremont, "the Pathfinder," Elias Howe, inventor of the sewing machine, Cyrus W. Field, layer of the first Atlantic cable, and John Lenthall, naval constructor.

A few paintings belonging to the Gallery were lent for exhibition elsewhere, as follows: "Plymouth Hills," by Mr. John W. Beatty, was shown at the Anglo-American Exposition in London from May to October, 1914. "Russian Tea," by Mr. Irving R. Wiles, was exhibited at Austin, San Antonio and Galveston, Tex., from February to April, 1915, in a loan exhibition assembled by The American Federation of Arts. Four canvases, at the requests of the artists, were sent to the Panama-Pacific Exposition at San Francisco in January, 1915. They consisted of "Plymouth Hills," by Mr. John W. Beatty; "A Good Story," by Miss Clara Taggart MacChesney; "Plenty," by Mr. Kenyon Cox; and "May Flowers," by Mrs. Louise Cox. All of the above belonged to the Evans collection.

Following is a list of the paintings and sculptures exhibited in the Gallery during last year. It includes both the permanent possessions of the Gallery and the loans.

List of Paintings and Other Objects in the National Gallery of Art.[1]

Bequest of Harriet Lane Johnston.[2]

Sir William Beechey (1753–1839).
Portrait of Miss Murray.

J. Henry Brown (1818—).
Miniature of President Buchanan.
Miniature of Harriet Lane Johnston. (Lent by Miss May S. Kennedy.)

[1] This list is brought down to June 30, 1915. All titles are of paintings in oil unless otherwise stated.

[2] Received in 1906.

John Constable (1776–1837).
The Valley Farm.
Henry Dexter (1806–1876).
Marble bust of President Buchanan.
Jacob Eicholtz (1776–1842).
Portrait of President Buchanan, at about 40 years of age.
Sir John Watson Gordon (1798–1864).
Portrait of the Prince of Wales (King Edward VII) in 1862.
John Hoppner (1758–1810).
Portrait of Mrs. Abington.
Cornelis Janssens (Van Keulen) (1590–1664).
Portrait of Madam Tulp.
Sir Thomas Lawrence (1769–1830).
Portrait of Lady Essex as Juliet.
Bernardino Luini (1460–1535).
Madonna and Child.
Frank B. Mayer (1827–1899).
Independence.
Harper Pennington.
Portrait of James Buchanan Johnston at the age of 14 years.
Francis Pourbus the younger (1569–1622).
Portrait of Josepha Boegart.
Sir Joshua Reynolds (1723–1792).
Portrait of Mrs. Hammond.
William Henry Rinehart (1825–1874).
Marble bust of Henry Elliot Johnston.
Marble bust of Harriet Lane Johnston. (Lent by Miss May S. Kennedy.)
Marble Cupid. Henry E. Johnston, jr., at the age of 2 years, as Cupid stringing his bow.
George Romney (1734–1802).
Portrait of Miss Kirkpatrick.
Thomas Prichard Rossiter (1817–1871).
The Prince of Wales (King Edward VII) and President Buchanan, with the Prince's suite, members of the President's Cabinet and other guests, at the Tomb of Washington, Mount Vernon, 1860.
Edwin Lord Weeks (1849–1903).
A Street Scene in the East.
Artist unknown. (After Correggio.)
Madonna and Child.

Comprised in the Harriet Lane Johnston bequest are also several miscellaneous articles of historical interest which are exhibited in connection with the paintings and sculptures.

GIFT OF CHARLES L. FREER.[1]

AMERICAN ARTISTS.

Thomas W. Dewing.
- Portrait of a Young Girl.
- The Piano.
- The Blue Dress.
- After Sunset.
- The Carnation.
- Early Portrait of the Artist's Daughter.
- Before Sunrise.
- Portrait in Blue.
- Study of a Woman Seated.
- A Portrait.
- Girl with Lute.
- Portrait of a Girl.
- Portrait of the Artist's Daughter.
- Portrait of Thomas W. Dewing.
- Mandolin.
- La Comedienne.
- The Mirror.
- Yellow Tulips.
- A Lady Playing the Violoncello.
- The Garland.
- The Blue Dress.
- The Lute.
- In White.
- The Four Sylvan Sounds. (Two two-fold wood screens painted in oil.)
- Sappho (Pastel).
- The Pink Dress (Pastel).
- The Pearl (Pastel).
- Nude Study (Pastel).
- In Rose (Pastel).
- Pastel No. 4.
- Pastel No. 6.
- Pastel No. 14.
- Pastel No. 20.
- Study of a Head (Silver point).
- Study of a Nude Model (Silver point).
- Study of a Young Woman's Head in Two Tones (Silver point).

[1] According to the terms of the deed of gift, this collection remains in the possession of Mr. Freer during his life.

Childe Hassam.
The Chinese Merchants.
Winslow Homer.
Early Evening.
Waterfall in the Adirondacks (Water color).
A Fisherman's Day (Water color).
Sun and Cloud (Water color).
Gari Melchers.
Portrait of President Roosevelt.
John S. Sargent.
Landscape with Goats.
The Weavers.
Joseph Lindon Smith.
Priestess from Ankor-Wat, Cambodia, Indo-China.
Seated Buddha, from the Monument of Boro-Boedor, Java.
Abbott H. Thayer.
Head.
Portrait of the Artist's Son.
Portrait of the Artist's Eldest Daughter.
The Virgin.
Diana.
Sketch of Cornish Headlands.
Capri.
Monadnock in Winter.
Winged Figure.
Portrait of a Lady.
Monadnock No. 2.
Monadnock Mountain (Water color).
Dwight W. Tryon.
A Lighted Village.
Moonlight.
The Rising Moon—Autumn.
Sea—Sunset.
Twilight—Early Spring.
Springtime.
Daybreak—May.
Sunrise—April.
New England Hills.
Twilight—May.
The Evening Star.
Morning.
Sea—Night.
Sea—Morning.
Springtime.
Summer.

Dwight W. Tryon—Continued.
Autumn.
Winter.
Dawn.
The Sea—Evening.
April Morning.
October.
Autumn Day.
Night.
Autumn Morning.
Twilight—Autumn.
Evening—September.
Twilight—November.
An Autumn Evening.
Morning Mist.
Winter—Central Park (Water color).
Pasture Lands—Early Spring (Water color).
Central Park—Moonlight (Pastel).
Winter—Connecticut Valley (Pastel).
Late Spring (Pastel).
Night—A Landscape (Pastel).
Niagara Falls (Pastel).
Night—A Harbor (Pastel).
Early Night (Pastel).
The Sea—Moonlight (Pastel).
November Afternoon (Pastel).
The Sea—East Wind (Pastel).
The Sea—A Freshening Breeze (Pastel).
Easterly Storm (Pastel).
Night—The Sea (Pastel).
Autumn Evening (Pastel).
Moonlight (Pastel).
Sunset Before Storm (Pastel).
John H. Twachtman (1853–1902).
Drying Sails.
The Hidden Pool.
James McNeill Whistler (1834–1903).
Portrait Sketch of Mr .Whistler.
Portrait of Major Whistler.
Portrait of F. R. Leyland.
Rose and Silver—La Princess du Pays de la Porcelaine.
Jeune Femme Dite L'Americaine—Arrangement in Black and White. No. 1.
Nocturne. Southampton.
Nocturne. Blue and Silver—Bognor.

James McNeill Whistler (1834–1903)—Continued.
Nocturne. Blue and Silver—Battersea Reach.
Nocturne. Gray and Silver—Chelsea Embankment.
Symphony in Gray—Early Morning, Thames.
Nocturne. Opal and Silver.
The Thames in Ice.
Blue and Silver—Trouville.
Variations in Pink and Gray—Chelsea.
Variations in Flesh Color and Green—The Balcony.
Harmony in Purple and Gold, No. 2—The Golden Screen.
The Little Blue and Gold Girl.
Venus Rising From the Sea.
Venus.
Symphony in Green and Violet.
The White Symphony—Three Girls.
Symphony in White and Red.
Variations in Blue and Green.
Symphony in Blue and Pink.
Rose and Gold—The Little Lady Sophie of Soho.
The Little Red Glove. (Unfinished.)
Rose and Brown—La Cigale.
An Orange Note—Sweetshop.
A Note in Blue and Opal—The Sun Cloud.
Vert et Or—Le Raconteur.
Petite Mephiste.
Green and Gold—The Great Sea.
The Little Nurse.
The Angry Sea.
The Summer Sea.
Blue and Silver—Boat Entering Pourville.
Gray and Gold—High Tide at Pourville.
The Butcher Shop.
The Gray House.
Purple and Gold—Phyrne, the Superb, Builder of Temples.
Chelsea Shops.
Blue and Gray—Unloading.
The Sea and Sand.
Harmony in Brown and Gold—Old Chelsea Church.
Blue and Green—The Coal Shaft.
The White House.
Wortley—Note in Green.
Low Tide.
A Note in Red.
A Portrait.
Devonshire Landscape.

James McNeill Whistler (1834–1903)—Continued.
Little Green Cap.
Yellow and Blue.
Purple and Blue.
Trafalgar Square—Chelsea.
Portrait of Stevie Manuel.
Nocturne. Blue and Gold—Valparaiso.
The Little Faustina. (Unfinished.)
Gray and Silver—The Life Boat (Gris et Argent—Le Bateau de Sauvetage).
Gold and Orange—The Neighbors (Or et Orange—Les Voisines).
The Little Red Note (La Petit Note Rouge).
The Sad Sea—Dieppe.
Gray and Silver—The Mersey (Water color).
Blue and Gold—The Rose Azalea (Water color).
Chelsea Children (Water color).
Thames Near Erith (Water color).
Blue and Silver—Chopping Channel (Water color).
Green and Silver—Beaulieu Terrace (Water color).
Portrait of Mrs. Whibley (Water color).
The Sea Shore (Une Plage) (Water color).
Oxtead, Surrey (Water color).
Moreby Hall (Water color).
Amsterdam in Winter (Water color).
Southend Pier (Water color).
Note in Blue and Opal—Jersey (Water color).
Study for "The Tall Flower" (Water color).
London Bridge (Water color).
St. Ives—Sunset (Water color).
St. Ives—Cornwall (Water color).
Venice Harbor (Water color).
Southend—Sunset (Water color).
Southend—The Pleasure Yacht (Water color).
Reach in Upper Thames (Water color).
Ranleigh Gardens (Water color).
Pink Note—The Novelette (Water color).
Nocturne. Black and Red—Back Canal, Holland (Water color).
Nocturne. Gray and Gold—Canal, Holland (Water color).
Nocturne. Grand Canal, Amsterdam (Water color).
Petit Dejeuner—Note in Opal (Water color).
The Studio—Note in Pink and Purple (Water color).
Harmony in Violet and Amber (Water color).

James McNeill Whistler (1834–1903)—Continued.
A Note in Green (Water color).
Pink Note—Shelling Peas (Water color).
Bravura in Brown (Water color).
Erith—Evening (Water color).
Gray and Silver—Pier, Southend (Water color).
Opal Beach (Water color).
The Mouth of the River (Water color).
The Bathers (Water color).
The Anchorage (Water color).
The Ocean Wave (Water color).
Millie Finch (Water color).
Flower Market, Dieppe (Water color).
Resting in Bed (Water color).
A Little Red Note—Dordrecht (Water color).
Nude Figure and Cupid (Water color).
The Blue Dress (Pastel).
Venice (Pastel).
A Violet Note (Pastel).
Rose and Red—The Little Pink Cap (Pastel).
The Purple Cap (Pastel).
The Green Cap (Pastel).
Harmony in Blue and Violet (Pastel).
Venetian Doorway (Pastel).
Writing on the Wall (Pastel).
Sleeping (Pastel).
Pour le Pastel. Rose and Opal (Pastel).
Morning-Glories (Pastel).
Mother and Child—The Pearl (Pastel).
A Street in Venice (Pastel).
Nocturne. Battersea Bridge (Pastel).
The Purple Iris (Pastel).
Venus Astarte (Pastel).
The Grand Canal, Venice (Pastel).
The Shell (Pastel).
The Isles of Venice (Pastel).
The Marble Palaces (Pastel).
Bead-Stringers, Venice (Pastel).
The Model Seated (Pastel).
The Blue Girl (Pastel).
Little Nude (Pastel).
The Purple Cap (Pastel).
Annabel Lee (Pastel).
Venetian Courtyard (Pastel).

James McNeill Whistler (1834–1903)—Continued.
Doorway (Pastel).
Resting (Pastel).
A Study in Red (Pastel).
Blue and Rose—The Open Fan (Pastel).
113 Drawings and sketches.
1 Album of sketches.
413 Etchings and dry points (626 impressions).
173 Lithographs (194 impressions).
3 Wood engravings.
38 Original copper plates (including the Thames set of 16, with an impression from each of the plates after they had been defaced, and the Coast Survey plate).
The entire decorations of The Peacock Room.

ORIENTAL PAINTINGS.

Screens. Japanese, 146; Chinese, 4.
Panels. Japanese, 70; Chinese, 40.
Kakemono. Japanese, 272; Chinese, 174.
Makimono or scroll paintings. Japanese, 18; Chinese, 141.
Albums containing from 4 to 78 paintings and sketches each. Japanese, 4; Chinese, 29.
Tibetan paintings, 13.

ORIENTAL POTTERY.

Japanese, 754; Chinese, 263; Korean, 224.
Central and western Asian, 297, of which 158 were from Rakka, 96 from Persia, 15 from Babylonia, and the remainder from miscellaneous sources, including Saltonabad, Hembodji, Djohar, Damascus, and Arabia.
Egyptian, 137; Moorish, 1; Greek, 3.

ORIENTAL BRONZES.

Chinese, 220; Japanese, 6; Egyptian, 7; Persian, 2; Grecian, 2; and 1 each from Korea, Babylonia, Syria, Cambodia, Anthia, Swankholor Sukhotai, Chien-Rai (Western Laos), and an unknown locality.

STONE OBJECTS, SCULPTURES, AND CUTTINGS.

Chinese, 242 (including 105 jade objects); Japanese, 1; Egyptian, 20.

LACQUERED OBJECTS.

Japanese, 22; Chinese, 9.

GLASS.

A collection of ancient Egyptian glass, comprising bottles, vases, and miscellaneous shapes, numbering over 600 pieces. Also 1 piece each of Persian and Chinese glass.

WOOD CARVINGS.

Japanese, 12; Chinese, 2; Egyptian, 3.

MISCELLANEOUS OBJECTS.

Includes gold ornaments, medallions, etc., of Byzantine and Cypriote origin, ivory statuettes from Cambodia, and various objects from China, Japan, Korea, Egypt, and Damascus, aggregating 62 in number.

GIFT OF WILLIAM T. EVANS.[1]

John White Alexander (1856–1915).
A Toiler.
Hugo Ballin.
The Sibylla Europa—Prophesied the Massacre of the Innocents.
The Lesson.
John Wesley Beatty.
Plymouth Hills.
Otto Walter Beck.
Christ before Pilate (Pastel).
Suffer the Little Children to Come unto Me (Pastel).
James Carroll Beckwith.
The Blacksmith.
Frank Alfred Bicknell.
October Morning.
Ralph Albert Blakelock.
At Nature's Mirror.
The Canoe Builders.
Moonrise.
Sunset, Navarro Ridge, California Coast.
Robert Frederick Blum (1857–1903).
Canal in Venice, San Trovaso Quarter.
George H. Bogert.
Sea and Rain.
George Elmer Browne.
The Wain Team.
George de Forest Brush.
The Moose Chase.
William Gedney Bunce.
Sunset, San Giorgio, Venice.
Emil Carlsen.
The South Strand.

[1] This collection of the works of contemporary American artists, begun in 1907, has been continuously enlarged until the present time.

Mary Cassatt.
Caresse Enfantine.
William Merritt Chase.
Shinnecock Hills.
Frederick Stuart Church.
The Black Orchid.
Circe.
William Baxter Palmer Closson.
Nymph and Water Babies at Play.
William Anderson Coffin.
September.
J. Foxcroft Cole (1837–1892).
Late Afternoon near Providence.
Charlotte Buell Coman.
Early Summer.
Eanger Irving Couse.
Elk-Foot (Pueblo Tribe).
Kenyon Cox.
Plenty.
Louise Cox.
May Flowers.
Bruce Crane.
Autumn.
Charles Courtney Curran.
The Perfume of Roses.
Leon Dabo.
Evening on the Hudson.
Elliott Daingerfield.
The Child of Mary.
Charles Harold Davis.
Summer.
Henry Golden Dearth.
An Old Church at Montreuil.
Frank De Haven.
Castle Creek Canyon, South Dakota.
Edwin Willard Deming.
The Mourning Brave.
William Rowell Derrick.
The Plaza.
Louis Paul Dessar.
Return to the Fold.
The Watering Place.
Charles Melville Dewey.
The Harvest Moon.
The Close of Day.

Thomas Wilmer Dewing.
Summer.
Paul Dougherty.
Sun and Storm.
Charles Warren Eaton.
Gathering Mists.
Wyatt Eaton (1849–1896).
Ariadne.
Portrait of William T. Evans.
Benjamin R. Fitz (1855–1891).
A Pool in the Forest.
James William Fosdick.
Adoration of Saint Joan of Arc. (Fire etching on wood.)
Ben Foster.
Birch-Clad Hills.
George Fuller (1822–1884).
Ideal Head.
Portrait of Henry B. Fuller, 1873.
Henry Brown Fuller.
Illusions.
Robert David Gauley.
The Fur Muff.
Edward Gay.
The Hillside.
Lillian Matilde Genth.
Adagio.
Depths of the Woods.
R. Swain Gifford (1840–1905).
Near the Ocean.
Sanford R. Gifford (1823–1880).
The Villa Malta.
Albert Lorey Groll.
Laguna—New Mexico.
Charles Paul Gruppe.
The Meadow Brook.
Jonathan Scott Hartley (1845–1912).
Bronze bust of William T. Evans.
Childe Hassam.
Spring, Navesink Highlands.
The Georgian Chair.
Arthur Turnbull Hill.
After a Storm, Amagansett.
Winslow Homer (1836–1910).
High Cliff, Coast of Maine.
The Visit of the Mistress.

William Henry Howe.
My Day at Home.
Alfred Cornelius Howland (1838–1909).
Friendly Neighbors.
William Morris Hunt (1824–1879).
The Spouting Whale.
George Inness (1825–1894).
Niagara.
Sundown.
Georgia Pines.
September Afternoon.
Alphonse Jongers.
Portrait of William T. Evans.
William Sergeant Kendall.
An Interlude.
John La Farge (1835–1910).
Visit of Nicodemus to Christ.
William Langson Lathrop.
The Three Trees.
Ernest Lawson.
An Abandoned Farm.
Louis Loeb (1866–1909).
The Siren.
Will Hicok Low.
Christmas Morn.
Albert Pike Lucas.
October Breezes.
Clara Taggart MacChesney.
A Good Story.
William Edgar Marshall (1836–1906).
Portrait of Henry Wadsworth Longfellow.
Portrait of the Artist, age 23.
Homer D. Martin (1836–1897).
Lower Ausable Pond.
Evening on the Seine.
The Iron Mine, Port Henry, New York.
Willard Leroy Metcalf.
A Family of Birches.
Addison T. Millar (1860–1913).
The Waterfall.
Robert C. Minor (1840–1904).
A Hillside Pasture.
Great Silas at Night.

James Henry Moser (1854–1913).
Evening Glow, Mount McIntyre.
Henry Siddons Mowbray.
Idle Hours.
John Francis Murphy.
The Path to the Village.
Indian Summer.
Charles Frederick Naegele.
Mother Love.
George Glenn Newell.
Mists of the Morning.
H(enry) Hobart Nichols.
Moonrise at Ogunquit.
Leonard Ochtman.
Morning Haze.
Henry Ward Ranger.
Entrance to the Harbor.
Connecticut Woods.
The Cornfield.
Bradbury's Mill Pond No. 2.
Groton Long Point Dunes.
Robert Reid.
The White Parasol.
The Mirror.
Frederic Remington (1861–1909).
Fired On.
Theodore Robinson (1852–1896).
La Vachère.
Old Church at Giverny.
William S. Robinson.
Monhegan Headlands.
Albert Pinkham Ryder.
Moonlight.
William Sartain
Algerian Water Carrier.
Walter Shirlaw (1838–1909).
Among the Old Poets.
Roses.
Water Lilies.
Roswell Morse Shurtleff (1838–1915).
The Mysterious Woods.
William Thomas Smedley.
One Day in June.

Abbott Handerson Thayer.
Dublin Pond, New Hampshire.
Dwight William Tryon.
November.
John Henry Twachtman (1853–1902).
Round Hill Road.
The End of Winter.
The Torrent.
Fishing Boats at Gloucester.
Alexander Theobald Van Laer.
Early Spring.
Elihu Vedder.
The Cup of Death.
Douglas Volk.
The Boy with the Arrow.
Henry Oliver Walker.
Eros et Musa.
Musa Regina.
Portrait of Mrs. Evans and Son.
Horatio Walker.
Sheepyard—Moonlight.
Edgar Melville Ward.
The Blockmaker.
Frederick Judd Waugh.
After a Northeaster.
Southwesterly Gale, St. Ives.
The Knight of the Holy Grail.
Julian Alden Weir.
A Gentlewoman.
Upland Pasture.
Portrait of Wyatt Eaton.
Worthington Whittredge (1820–1910).
Noon in the Orchard.
Carleton Wiggins.
Evening after a Shower.
The Pasture Lot.
Guy C. Wiggins.
Columbus Circle—Winter.
Gloucester Harbor.
Irving Ramsay Wiles.
The Brown Kimono.
Russian Tea.
Frederick Ballard Williams.
A Glade by the Sea.
Conway Hills.

Alexander H. Wyant (1836–1892).
Autumn at Arkville.
The Flume, Opalescent River, Adirondacks.
Housatonic Valley.
Spring.
Cullen Yates.
Rock-Bound Coast, Cape Ann.

The Evans collection also includes an excellent series of proofs of American wood engravings, 115 in number, representing the work of Victor Bernstrom, William B. P. Closson, Timothy Cole, John P. Davis, Frank French, T. Johnson, F. S. King, Elbridge Kingsley, G. Kruell, R. A. Muller, C. A. Powell, S. G. Putnam, John Tinkey, F. H. Wellington, Henry Wolf, and Fred Yuengling.

OTHER PERMANENT ACQUISITIONS.

Paul W(ayland) Bartlett.
Statue of Lafayette.
Original model, in plaster, of the bronze equestrian statue erected in the Square of the Louvre, Paris, France, in 1900, by the school children of the United States.
Gift of the sculptor, 1914.
Nicolas Berghem (1620–1683).
Cattle Piece, Peasants, etc.
Received with the effects of James Smithson, founder of the Smithsonian Institution.
Frederic Edwin Church (1826–1900).
Aurora Borealis.
Gift of Miss Eleanor Blodgett, of New York, 1907.
Frank Duveneck.
Portrait sketch of Walter Shirlaw at the age of 35.
Gift of Mrs. Walter Shirlaw, 1913.
R. E. W. Earl.
Portrait of Andrew Jackson in the Uniform of a Major General, U. S. Army.
Presented to the National Institute in 1844 by Maj. William H. Chase, U. S. Engineers. Received from the Institute in 1862.
John Elliott.
Diana of the Tides. A mural decoration.
Gift of Mr. and Mrs. Larz Anderson, of Washington, 1910.
Antoine Etex (1808–1888).
Scene from the "Gentleman of France."
Gift of Mr. Nathan Appleton, of New York, 1903.

Harrington Fitzgerald.
The Wreck.
Gift of the artist, 1913.
Horatio Greenough (1805–1852).
Statue of Washington. Marble.
Transferred to the custody of the Smithsonian Institution by joint resolution of Congress approved May 22, 1908.
Osman Hamdy Bey (1842–1910).
Tomb of "Mahomet the Gentleman" at Broussa.
Bequest of Mrs. Elizabeth C. Hobson, of Washington, for whom it was painted in 1884. 1912.
Du Bois Fenelon Hasbrouck.
Autumn Landscape.
Presented by Mr. Frederic Fairchild Sherman, of New York, in memory of his wife, Eloise Lee Sherman, 1913.
George Peter Alexander Healy (1808–1894).
Portrait of F. P. G. Guizot.
Painted in 1841 on the commission of American citizens residing in Paris, and by them forwarded to President Tyler to be hung in one of the public buildings in Washington. Received from the National Institute in 1862.
Portrait of William C. Preston.
Portrait of President John Tyler.
These two portraits were painted for the National Institute, from which they were received in 1862.
Portrait of Col. Albert G. Brackett, U. S. Army.
Bequest of Mrs. Albert G. Brackett, of Washington, 1912.
Alfredo Helsby.
Full Moon. A landscape at Limache, Chile.
Presented by the Embassy of Chile at Washington, through Señor Don Eduardo Suarez-Mujica, Ambassador, 1915.
Vinnie Ream Hoxie (1847–1914).
Marble statue of the goddess Sappho, typifying the Muse of Poetry.
Modeled by Vinnie Ream between 1865 and 1870. Gift of Brig. Gen. Richard L. Hoxie, U. S. Army (retired), of Washington, 1915.
Samuel Isham (1855–1914).
Wooded Landscape.
Gift from the estate of Samuel Isham, in accordance with the wishes of the artist, 1914.
Eastman Johnson (1824–1906).
Portrait of Mrs. Cross, of Milford, Pa.
Gift of Mrs. James W. Pinchot, of Washington, 1910.

Edward Kemeys (1843–1907).
The Still Hunt.
Plaster model of the crouching cougar, being the original of the bronze cast in Central Park, New York City.
Gift of the sculptor, 1883.

Henry Hudson Kitson.
Bronze bust of the Right Honorable, the Viscount Bryce, O. M., Ambassador of Great Britain to the United States, 1907–1913.
Gift of the sculptor, 1914.

Isidore Konti.
Beale and Carson hailing Stockton's Flagship.
Bronze tablet commemorating an act of heroism by Acting Lieutenant (afterwards General) Edward F. Beale and Kit Carson during the War with Mexico.
Gift of Hon. Truxton Beale, of Bakersfield, Cal., 1910.

Norwood Hodge MacGilvary.
Twilight after Rain.
Presented by Mr. Frederic Fairchild Sherman, of New York, in memory of his wife, Eloise Lee Sherman, 1913.

Michelangelo (1475–1564).
Head of David. Plaster cast from the original.
Gift of Louis Amateis, of Washington, 1912.

Adrien Moreau.
Crossing the Ferry.
Presented by Mrs. James Lowndes, of Washington, in memory of her father, Lucius Tuckerman, 1908.

Joseph Mozier (1812–1870).
Il Penseroso. (Marble.)
Transferred from the Capitol at Washington, 1888.

Elizabeth Nourse.
Fisher Girl of Picardy.
Presented by Mrs. Elizabeth C. Pilling, of Washington, in memory of her husband, John Walter Pilling, 1915.

Arvid F. Nyholm.
Portrait of John Ericsson.
Gift of the Swedish American Republican League of Illinois, 1912.

Lucien Whiting Powell.
Grand Canyon of the Yellowstone River.
Gift of Hon. J. B. Henderson, of Washington, 1907.

Thomas Buchanan Read (1822–1872).
Portrait of himself.
Gift of Miss Maria Fassett Robinson, of Washington, 1907.

Henry Reuterdahl.
The Combat between the Monitor and the Merrimac.
Gift of the Swedish American Republican League of Illinois, 1912.
José de Ribera (Spagnoletto) (1588–1652).
Job and His Comforters.
Presented by Dr. Robert W. Gibbes, of Columbia, S. C., in 1841, to the National Institute, from which it was received in 1862.
William Rimmer (1821–1879).
The Falling Gladiator. Original cast in plaster.
Gift of Miss Caroline Hunt Rimmer, of Lexington, Mass., 1915.
Walter Shirlaw (1838–1909).
Bell Foundry, Germany. Study for "Toning of the Bell."
Study Head—Madam Capri.
The Inn, Germany.
Easter Greeting (Pastel).
Gift of Mrs. Walter Shirlaw, 1913.
Max Weyl (1837–1914).
Indian Summer Day.
Gift of thirty Washington friends of the artist, to commemorate his seventieth birthday, December 1, 1907.
Artists unknown.
Portrait of Washington.
Bust portrait belonging with the Lewis collection of Washington relics, purchased by the Government in 1878. Received from the Department of the Interior in 1910.
Portrait of Andrew Jackson.
Deposited by the Navy Department, 1907.

LOAN COLLECTIONS.[1]

From The National Association of Portrait Painters.
Cecilia Beaux. Portrait of Hon. A. Piatt Andrew.*
George Bellows. Portrait of Willard Straight, Esq.*
Frank W. Benson. Portrait of Philip Little.*
William M. Chase. Portrait of Miss N.;* Portrait of William Grosvenor.*
William Cotton. Portrait of Miss Dorothy Gordon King.*
Brenetta Herrman Crawford. Portrait of Mrs. Riccardo Martin.*

[1] This list includes all objects exhibited as loans during the fiscal year 1914–1915, those removed from the Gallery previous to June 30, 1915, being indicated by an asterisk.

From The National Association of Portrait Painters—Continued.
Earl Stetson Crawford. Portrait of "Peggy" as Pierette;* Portrait of Miss Eleanor Woodroffe.*
Howard Gardiner Cushing. Portrait.*
Lydia Field Emmet. Marjorie.*
Charles Dana Gibson. Portrait of A Girl with Guitar.*
Victor D. Hecht. Portrait of Mrs. Isaac Untermyer.*
Robert Henri. Portrait.*
Henry Salem Hubbell. Portrait.*
John C. Johansen. Portrait of Mr. Alexander W. Drake.*
De Witt M. Lockman. Portrait—Mr. E. L. Y.;* Portrait of Miss D.*
George Luks. Portrait of Morgan Robertson.*
M. Jean MacLane. Portrait—Léonie.*
Ellen Emmet Rand. Portrait of H. F. du Pont, Esq.*
S. Montgomery Roosevelt. Portrait of A Lady;* The Rt. Hon., the Earl of Kintore, G. C. M. G.*
William T. Smedley. Portrait of Miss G.*
Eugene E. Speicher. Portrait.*
Robert Vonnoh. Portrait of Mrs. W. W. Walker.*
Irving R. Wiles. Portrait of Miss Gladys Wiles.*

From The American Federation of Arts.
W. Dacres Adams, of London. The Monument.
Edmond Aman-Jean, of Paris. Portrait Group of the Family of Aman-Jean.
S. J. Lamorna Birch, of Penzance, England. October: The River Course near Montreuil-sur-Mer.
Jacques Emile Blanche, of Paris. Anniversary.
Stephen Bosznay, of Budapest. By the River.
Max Clarenbach, of Wittlaer bei Kaiserswerth, Germany. Garden.
Charles Cottet, of Paris. Port of Douarnenez, Brittany.
John Crealock, of London. The Red Sofa.
Ludwig Dill, of Karlsruhe, Germany. Evening: Junipers in Winter.
Sir Alfred East (English, 1849–1913). The Rainbow.
Hermann Göhler, of Karlsruhe, Germany. Schloss Monrépos.
Franz Grässel, of Munich. Ducks on the Bank.
Alexander Jamieson, of London. Silence.
Julius Paul Junghanns, of Düsseldorf. A Memory of the Tyrol.
Laura Knight, of Penzance, England. The Governess.
Gaston La Touche (French, 1854–1913). The Ford.
B. Eastlake Leader, of St. Buryan, Cornwall, England. Moonlight after Rain.

From The American Federation of Arts—Continued.
Henri J. G. Martin, of Paris. The Village of Labastide.
Bertram Priestman, of London. The Chalk Quarry.
René Xavier Prinet, of Paris. The Author.
George Sauter, of London (German). Mrs. Penelope Wheeler.
Willy Sluiter, of Laren, Holland. Autumn Day.
George Spencer Watson, of London. Hilda and Maggie.

From Mr. Ralph Cross Johnson, of Washington.
Sir Augustus W. Callcott. St. Paul's Church and Blackfriars Bridge, London.
John Constable. Dedham Vale.
David Cox. Outskirts of a Wood.
N. Drost. Portrait of a Young Girl.
Govaert Flinck. Madonna and Child.
Francesco Guardi. A View in Rome.
William Hogarth. Portrait of Mrs. Price.
J. Jordeans. Rubens' Wife.
Sir Thomas Lawrence. Portrait of Mrs. Towry; Portrait of Sir Thomas Lawrence; Portrait of Lord Abercorn.
Nicolaes Maes. A Man's Portrait.
Sir Henry Raeburn. Portrait of Archibald Skirving.
Sir Joshua Reynolds. Portrait of the Duchess of Ancaster; Portrait of Viscount Hill; Portrait of Lord Lifford, Irish Chancellor.
David Roberts. Kings College Chapel, Cambridge, England.
George Romney. Portrait of Sir Sampson Wright.
William Clarkson Stanfield. Marine.
Jan Steen. The Doctor's Visit.
J. B. Tiepolo. Christ in the Temple.
Jakob Van Strij. Evening by a River with Horsemen.
Richard Wilson. Italian Landscape; Italian Landscape, Evening.

From Mr. W. A. Slater, of Washington.
Jean Baptiste Camillé Corot. A Gray Day; Nymphs and Fauns.
Charles François Daubigny. Springtime.
Eugène Delacroix. Return of Columbus to Court of Ferdinand.
Narcisse Diaz. Forest of Fontainebleau; Group of Dogs; Island of the Cupids.
Jules Dupré. The Landing; Three Oaks.
Ignaz Marcel Gaugengigl. The Quartet.
Meindert Hobbema. The Mill.
Madam Vigée Lebrun. Portrait of a Lady.
Louis Victor Felix Mettling. Portrait of a Boy.

From Mr. W. A. Slater, of Washington—Continued.
Jean François Millet. The Drinking Place; Seamstresses Sewing on Shroud.
Monticelli. Female Figure.
A. Pasini. At the Barracks, Constantinople.
Raffaëlli. Winter Landscape.
Rembrandt van Rijn. The Rabbi.
Theodore Rousseau. Sunset in a Wood.
Jacob Ruysdael. The Dunes near Haarlem.
Constant Troyon. Horses at Watering Trough.
Alexander H. Wyant. Landscape.
From Mrs. Abercrombie-Miller, of Washington.
Eugène Verboeckhoven. Sheep.
Hillner. Alpine Landscape.
From Mrs. Dora B. Amateis.
Louis Amateis. Portrait bust of the Artist's Son. (Marble.)
From the Duchess de Arcos.
Eighteen paintings by foreign artists, only a part of which have been identified, and one marble, Bacchante, by Bien Aimé.
From Mr. John S. Beck.
Charles Willson Peale (Attributed to). Portrait of George Washington.
From Mr. J. Carroll Beckwith, of New York.
J. Carroll Beckwith. The Emperor.
From Col. John Biddle, U. S. Army.
Thomas Sully. Portrait of Major John Biddle, U. S. Army.
From Miss Susan D. Biddle, of Detroit, Mich.
Thomas Sully. Portrait of Eliza Bradish Biddle, wife of Major Biddle.
From Dr. Nathan Boyd, of Washington.
G. Mazzolini. Portrait of Beatrice Cenci.
Titian. Portrait of his Daughter. (Copy.)
From Mr. Henry K. Bush-Brown, of Washington.
Henry K. Bush-Brown. Bust of Lincoln. Plaster cast of bronze bust of Lincoln, by Mr. Bush-Brown, at the National Cemetery, Gettysburg.
From the Capitol, through Mr. Elliott Woods, Superintendent.
Louis Amateis. Bronze Doors for West Entrance to U. S. Capitol.
From Dr. Thomas M. Chatard, of Washington.
Janssens. Portrait of Henrietta Maria.*
Sir Peter Lely. Portrait of Mrs. Rous.*
Thomas Sully. Portrait of Mrs. Nicholas Bosley, of Hayfields, Md.*

From Mr. William Baxter Palmer Closson, of Newton, Mass.
William Baxter Palmer Closson. The Angel.
From Mrs. John Cropper, of Washington.
Michele Gordigiani. Portrait of Mr. John Cropper; Portrait of Mrs. John Cropper.
From Rev. F. Ward Denys, of Washington.
Sir William Beechey. Mrs. Hawkins and Family.
Frank Duveneck. Water Carriers—Venice.
Perugino. Madonna and Child.
Guido Reni. St. Michael.
George Frederick Watts. Lady and Two Children.
Richard Wilson. Rome and the Campagna.
From Mr. W. A. Dickey, of Seattle, Wash., and others.
Sydney M. Laurence. The Top of the Continent—Mt. McKinley, Alaska.
From Mrs. Florence A. Ebbs, of Washington.
Romanelli. Esmeralda. (Marble.)
Harriet Hosmer (Attributed to). Cordelia. (Marble.)
From Miss Silvie de Grasse Fowler, of Washington.
Nicolas de Largillière. Portrait of François Paul de Grasse de Rouville, Amiral Comte de Grasse.
G. P. A. Healy. Portrait of Theodosius O. Fowler.
Benjamin West. Portrait of St. Bernard dog, Hero.
From Dr. Anton Gloetzner, of Washington.
Otho van Veen (Attributed to). The Nativity.
From Mrs. Mary F. C. Goldsborough, of Washington.
Hobbema (Attributed to). The Old Mill.
From Mr. William F. Halsall, of Boston.
William F. Halsall. Our Glory—Battleship Oregon;* The Ocean Rover;* Like a Sheeted Ghost.*
From Mrs. John Hay.
Augustus Saint-Gaudens. Standing Lincoln, reduced copy of the statue of Lincoln by Saint-Gaudens in Lincoln Park, Chicago, Ill. (Bronze.)
From the estate of E. E. Howell.
Thomas Moran. From Hiawatha.
From Mrs. Julian James, of Washington.
Robert Weir. View up the Hudson.*
From Mrs. Edward Kemeys, of Washington.
Frederick W. Freer. Portrait of Edward Kemeys.
Alfred Jansson. A Gray Day in the Environs of Chicago.
Edward Kemeys. Tiger between ruins of stone wall, brown landscape; Catamount standing on rock-shelf; Catamount on rock-shelf with wraith; Catamount standing at attention; Scotch Deerhound; Young Hounds; Bison on plains, examining skull.

From Mrs. Edward Kemeys, of Washington—Continued.

Edward Kemeys. 48 Models of animals in plaster and bronze, including the following received during 1915: Bronzed plaster casts of Coyote and Fox, and 2 bronze candelabra with animal figures.

E. Kemeys, jr. Head of Hound.

Stanley McCormick. Black Peak on the Urraca Ranch, Cimarron, N. M.

Bert Phillips. Painting of Indian Chief, Na-Ah-Kuh-Na; Painting of Indian Chief, Tudl-Tur.

F. Reaugh. Cattle on plains at rest, brown-and-white steer in foreground.

Fred Richardson. Spring Landscape.

von Saltza. Portrait of Edward Kemeys; Portrait of Mrs. Edward Kemeys.

R. M. Shurtleff. Autumn woodland scene.

Grace Sulzer. Painting of Indian girl, Sha-i-ti-wi; landscape, Quogue, Long Island.

Unsigned. Head of Catamount.

From Mrs. Louise Catlin Kinney.

W. H. Fisk. Portrait of George Catlin.

From Mr. Henry Hudson Kitson, of New York.

Henry Hudson Kitson. Bust of Vittorio Emanuele III, King of Italy (Plaster).

From Mrs. James Lowndes.

Pierre Marie Beyle. Fishing for Eels.*

Blaise Alexandre Desgoffe. Still Life.*

Jehan Georges Vibert. Preparing for the Masquerade.*

From Mrs. Mary Peoli Maginn, of New York.

John J. Peoli. Love Conquers; Cupid Caged.

From Mr. Benson B. Moore, of Washington.

L. Fissette. Interior.

Z. Noterman. Might is Right.

Adrian von Ostade (Attributed to). Interior.

Rembrandt (Attributed to). Portrait of Rembrandt.

From Mrs. Frances E. Musgrave, of Washington.

J. Van Lerius. Death Preferred.

From Mrs. James W. Pinchot.

Launt Thompson. Statue of Napoleon (Bronze).

From Mrs. J. W. Powell, of Washington.

Thomas Moran. In the Grand Canyon of the Colorado.

From Mrs. C. V. Purdy, of Washington.

Thomas Cole. Autumn.

From Mrs. Augustus Saint-Gaudens, of Windsor, Vt.

Augustus Saint-Gaudens. Bust of Lincoln—being a replica of the bust part of the statue of Lincoln by Saint-Gaudens, in Lincoln Park, Chicago (Bronze).

From Mr. Watterson Stealey, of Washington.

Jean Baptiste Adolphe Gibért. Portrait of Henry Clay.

From Mr. Theodore Sutro, of New York.

Edward Moran. Thirteen historical marine paintings, as follows: The Ocean—The Highway of all Nations; Landing of Leif Ericson in the New World, in 1001; The Santa Maria, Niña, and Pinta, Evening of October 11, 1492; The Debarkation of Columbus, Morning of October 12, 1492; Midnight Mass on the Mississippi over the Body of Ferdinand de Soto, 1542; Henry Hudson entering New York Bay, September 11, 1609; Embarkation of the Pilgrims from Southampton, August 5, 1620; First Recognition of the American Flag by a Foreign Government—In the Harbor of Quiberon, France, February 13, 1778; Burning of the Frigate Philadelphia—In the Harbor of Tripoli, February 16, 1804; The Brig Armstrong Engaging the British Fleet—In the Harbor of Fayal, September 26, 1814; Iron versus Wood—Sinking of the Cumberland by the Merrimac in Hampton Roads, March 8, 1862; The White Squadron's Farewell Salute to the Body of Captain John Ericsson, New York Bay, August 25, 1890; Return of the Conquerors—Typifying our Victory in the late Spanish-American War, September 29, 1899.

From Mr. George Treat, of Valdez, Alaska.

Sydney M. Laurence. The Trapper.

From Mr. Julius A. Truesdell, of Washington.

Gaylord Sangston Truesdell. After the Rain;* The Wayside Shrine;* Moonlight at the Sheep Fold;* Cows by the Sea;* The Path through the Gorse;* Spring Landscape.*

From Miss Emily Tuckerman, of Washington.

Eduardo Zamaçois. Refectory.

From Mr. Walter R. Tuckerman, of Washington.

Gilbert Stuart. Portrait of Joseph Tuckerman, D. D.*

From Mrs. George W. Vanderbilt, of Washington.

Edouard Manet. Le Repos; Rouvière, in the rôle of Hamlet.

Ignacio Zuloaga. Rosita.

From Mrs. Elizabeth Walbridge, of Washington.

Francesco di Rosa (Called Pacicco). Judith with the Head of Holofernes.

From Mr. T. B. Walker, of Minneapolis, Minn.

Benjamin West. The Raising of Jairus' Daughter.*

From Miss Olivia and Miss Ida Walter, of Washington.
Constantino Brumidi. The Five Senses.*
From Mrs. Henry Wells, of Washington.
Murillo (Copied from). The Beggars.
From Mr. William D. Wheeler, of Washington.
Thomas Sully. Portrait of the Artist's Daughter, Mrs. John H. Wheeler, and her Sons.
From Hon. George Peabody Wetmore, of Newport, R. I.
Constant Wauters. Versailles.
Edouard Detaille. Military Review (Water color).
From a friend of the Gallery.
Paul Veronese (Attributed to the period of). The Finding of Moses.

ART TEXTILES.

This important collection was enriched by many interesting articles, all of which were received as loans. Fifty-eight pieces of laces from Mrs. H. Kirk Porter, of Washington, were mainly illustrative of the early history of lace, as drawnwork, reticella, cut-work, embroidery, etc.; of bobbin lace of the 17th and 18th centuries; and of appliqué and needlepoint laces of the 18th and 19th centuries. A collection deposited by Mrs. Frank W. Mahin, wife of the American consul at Amsterdam, Holland, comprised 43 pieces, including besides a few embroideries, fine examples of point d'Alençon, Venetian, Argentan, Valenciennes, Mechlin, Brussels, Lille, Binche and other varieties.

Among the other noteworthy acquisitions were two pieces of Venetian rose point lace, from Miss Clara Farrar Smith, of Washington; a large number of embroideries on piña cloth, most of them antique and all showing fine needlework, from Mrs. Newton W. Gilbert, of Manila, P. I.; ecclesiastical brocade costumes, Venetian velvet of the 17th century, a piece of white silk embroidered in silver and gold and an escutcheon, from Mrs. Levi P. Morton, of Washington and New York; a square of rare purple cut velvet brocade of Louis XVI and an embroidered waistcoat, from Miss Emily Tuckerman, of Washington; a piece of Rhodian embroidery, an Empire tapestry and a square of Genoese velvet with fringes, from Mrs. Walter R. Tuckerman, of Edgewood, Md.; and an important piece of 15th century Flemish tapestry representing the departure of the caravels of Columbus from Palos, from Mr. and Mrs. John L. Steward, of New York.

The Museum was also greatly indebted for the loan, during a part of the year, by Messrs. P. W. French & Co., of New York, of 6 examples of tapestries of great beauty and value, which may be

briefly described as follows: A Royal Gobelins tapestry, sheep shearing scene, woven by Audran; a Royal Aubusson tapestry, woven about 1780, picturing Aeneas meeting Dido at the shores of Carthage, and surmounted with a beautiful red drapery effect border with garlands of flowers; a Royal Beauvais tapestry, a mythological subject with magnificent border of fruits and flowers, woven by Beheagle about 1700; a Flemish Verdure tapestry of the very finest quality with splendid border of fruits and flowers, woven by Werniers about 1700; and two 17th century Flemish tapestries, woven in Brussels about 1640, one after Rubens' cartoons and depicting the story of Sophonisba, the other after cartoons by one of Rubens' pupils, picturing Alexander the Great meeting his mother.

About the middle of the year the east-north range in the older building, in which the art textiles are exhibited, was entirely renovated, which included the filling in of several arched recesses in order to secure a flush wall surface throughout, the removal of much heavy woodwork about the windows, general repairs and pointing up, and the repainting of the walls and ceilings in tints better suited to the character of the exhibits. Several cases were subsequently added, and in February the ladies' committee began a new arrangement and installation of the collection which was continued well into the spring, though not wholly completed. Much time was spent in securing more appropriate and effective backgrounds for the laces in the upright cases, and other various changes were made, which resulted in greatly improving the appearance of the hall in general and of the contents of the cases.

The death in August, 1914, of Mrs. James W. Pinchot, to whom the Museum is mainly indebted for the establishment of this collection and who has been its principal benefactor, made necessary the reorganization of the committee of ladies to which its welfare is confided. This was effected during the year, Mrs. H. Kirk Porter being chosen chairman of the committee, whose other members are Mrs. R. G. Lay, Miss Tuckerman, Mrs. James Harlan, Mrs. Paul Bartlett, Mrs. A. E. Bates, Mrs. Frederick Keep and Miss Adams.

MISCELLANEOUS.

VISITORS.

The number of visitors to the new building aggregated 321,712, of which 262,135 represented the week day attendance and 59,577 the Sunday attendance, being a daily average of 837 for the former, and of 1,145 for the latter. The older Museum building, which is open only on week days, had a total of 133,202 visitors, or a daily average of 425. Owing to the extensive alterations in progress, which necessitated the dismantling of most of the collections and

the closing of its halls to the public during 5 months, the attendance at the Smithsonian building was reduced to 40,324 persons.

The following tables show, respectively, the attendance of visitors during each month of the past year, and for each year since 1881, when the older Museum building was first opened to the public:

Number of visitors during the year ending June 30, 1915.

Year and month.	Older Museum Building.	New Museum Building.	Smithsonian Building.	Year and month.	Older Museum Building.	New Museum Building.	Smithsonian Building.
1914.				1915.			
July	12,488	25,627	7,832	January	6,754	18,863	.....
August	15,991	33,569	9,522	February	7,243	20,443	.....
September	16,206	32,931	713	March	9,110	24,902	1,741
October	12,510	36,524	.....	April	13,801	29,563	8,169
November	8,280	23,008	.....	May	10,171	31,026	5,668
December	7,297	17,970	.....	June	13,351	27,286	6,679
				Total	133,202	321,712	40,324

Number of visitors to the Museum and Smithsonian Buildings since 1881.

Year.	Older Museum Building.	New Museum Building.	Smithsonian Building.	Year.	Older Museum Building.	New Museum Building.	Smithsonian Building.
1881	150,000	.....	100,000	1899–1900	225,440	.....	133,147
1882	167,455	.....	152,744	1900–1	216,556	.....	151,563
1883	202,188	.....	104,823	1901–2	173,888	.....	144,107
1884 (half year)	97,661	.....	45,565	1902–3	315,307	.....	181,174
1884–85 (fiscal year)	205,026	.....	105,993	1903–4	220,778	.....	143,988
1885–86	174,225	.....	88,960	1904–5	235,921	.....	149,380
1886–87	216,562	.....	98,552	1905–6	210,886	.....	149,661
1887–88	249,665	.....	102,863	1906–7	210,107	.....	153,591
1888–89	374,843	.....	149,618	1907–8	299,659	.....	237,182
1889–90	274,324	.....	120,894	1908–9	245,187	.....	198,054
1890–91	286,426	.....	111,669	1909–10	228,804	50,403	179,163
1891–92	269,825	.....	114,817	1910–11	207,010	151,112	167,085
1892–93	319,930	.....	174,188	1911–12	172,182	281,887	143,134
1893–94	195,748	.....	103,910	1912–13	173,858	319,806	142,420
1894–95	201,744	.....	105,658	1913–14	146,533	329,381	102,645
1895–96	180,505	.....	103,650	1914–15	133,202	321,712	40,324
1896–97	229,606	.....	115,709				
1897–98	177,254	.....	99,273	Total	7,580,776	1,454,301	4,532,416
1898–99	192,471	.....	116,912				

PUBLICATIONS.

The publications of the year comprised 9 volumes and 41 separate papers. The former consisted of the annual report of the Museum for 1914; volume 47 of the Proceedings; volume 19 of Contributions from the National Herbarium, entitled "Flora of New Mexico," by

Wooton and Standley; and the following Bulletins: No. 71, "A monograph of the Foraminifera of the North Pacific Ocean, Part V, Rotaliidae," by Joseph A. Cushman; No. 82, "A monograph of the existing crinoids, Volume 1, The Comatulids, Part 1," by Austin H. Clark; No. 88, "Revision of Paleozoic Stelleroidea with special reference to North American Asteroidea," by Charles Schuchert; No. 89, "Osteology of the armored Dinosauria in the United States National Museum, with special reference to the genus Stegosaurus," by Charles W. Gilmore; No. 90, "A monograph of the molluscan fauna of the Orthaulax pugnax zone of the Oligocene of Tampa, Florida," by William Healey Dall; and Special Bulletin No. 4, "American Hydroids, Part III, The Campanularidae and the Bonneviellidae," by Charles C. Nutting. Two papers for which there is a continuing demand were reprinted. These were Bulletin 39, part N, "Directions for preparing specimens of mammals," by Gerrit S. Miller, jr.; and paper No. 73 from the Museum Report for 1893, entitled "The poisonous snakes of North America," by Leonhard Stejneger. Of the 41 pamphlets issued in separate form in a small edition for prompt distribution to specialists, 12 were from volume 47, 28 from volume 48, and 1 from volume 49 of the Proceedings.

The distribution of volumes and separates to libraries and individuals on the regular mailing list aggregated approximately 43,400 copies, and, in addition, about 10,900 copies of publications of previous years were sent out in response to special applications.

Besides the papers above mentioned many contributions based on material in the Museum were published by other bureaus of the Government and by private institutions, all of which are cited in the bibliography. Those issued by the Smithsonian Institution comprise the following which appeared in the Miscellaneous Collections: "Explorations and field-work of the Smithsonian Institution in 1913"; "Archeology of the Lower Mimbres Valley, New Mexico," by J. Walter Fewkes; "The present distribution of the Onychophora, a group of terrestrial invertebrates," by Austin H. Clark; "Cambrian geology and paleontology. III. Pre-Cambrian Algonkian algal flora," by Charles D. Walcott; "Report upon a collection of ferns from western South America," by William R. Maxon; "The microspectroscope in mineralogy," by Edgar T. Wherry; and "Explorations and field-work of the Smithsonian Institution in 1914." In addition to these the Institution also published "The most ancient skeletal remains of man," by Aleš Hrdlička, in the Report for 1913, and "An index to the Museum Boltenianum," by William Healey Dall.

The editorial office, besides supervising the printing of the Museum publications, also has charge of all miscellaneous printing and binding.

LIBRARY.

With accessions during the year aggregating 2,209 volumes, 2,530 pamphlets, and 183 parts of volumes, the Museum library was increased to 45,818 volumes and 76,295 pamphlets and unbound papers, or a total of 122,113 titles, exclusive of duplicates. The additions were obtained by purchase, by exchange of Museum publications and by gift, the most liberal benefactors having been several members of the Museum staff. Among the donations of special note may be mentioned the scientific library of the late Prof. Theodore N. Gill, and the addition by Dr. William H. Dall of 162 titles to the sectional library of mollusks.

The appropriation for books, which has never been increased above $2,000 annually, is inadequate for securing all of the absolutely necessary publications only obtainable by purchase, this being especially so in the matter of current scientific literature and of expensive works printed privately. The library also meets with difficulty in regard to binding, the amount that can be spared from the printing item for this purpose being quite insufficient.

The unsettled conditions in Europe have delayed the receipt of many publications from the Old World, and have prevented to a large extent the negotiations for additional exchanges which had been begun. Over 3,000 volumes were borrowed from the Library of Congress and smaller numbers from the libraries of the Geological Survey, the Army Medical Museum and Library, and other bureaus.

The Museum has unfortunately been deprived of the important botanical library of Dr. E. L. Greene, which was deposited in 1904 for a period of 10 years, with the privilege of purchasing. Not having the means for complying with these terms the books have been disposed of elsewhere.

MEETINGS AND CONGRESSES.

The auditorium, the adjoining committee rooms, and other space in the new building were frequently utilized during the year for lectures, meetings and other public gatherings having objects relating to those of the Institution and also for official purposes of the Government. The lectures of The Washington Society of the Fine Arts were, as during the two previous years, given in the auditorium and were well illustrated in various ways. There were three courses, as usual, one of 6 lectures for members of the society on "The art of to-day," one of 6 lectures for the public on "The decorative arts—The great periods in the history of art," and finally one of 5 lectures on "The romantic period of music." The first of these series

was given on Wednesday evenings, the second on Tuesday evenings, and the third on Saturday evenings, not more than three in any month, from November 7 to April 14. The titles of the lectures in the members' course were, "Sculpture," by Mr. Lorado Taft; "Painting," by Dr. Christian Brinton; "Architecture," by Prof. A. D. F. Hamlin; "The dance," by Mr. Troy Kinney; "Dress," by Mrs. John W. Alexander; and "Pageantry," by Mr. Joseph Lindon Smith. The other two courses were each given by a single person. The public course, by Mr. Frank Alvah Parsons, was divided as follows: "Historic decorative art periods and their relation to our modern life"; "The Italian decorative styles and their influence on all subsequent art periods"; "The Italian Renaissance in France under Francis I, Henry II, III, and Louis XIV, and their use and abuse in modern life"; "The periods of Louis XV, XVI and Empire as they may be effectively used now"; "The English Renaissance under Henry VIII, Elizabeth and the Stuart Kings, with their American adaptations"; "The Georgian and Colonial periods and our present day problem." The music series was by Prof. Daniel Gregory Mason, with the following titles: "Romanticism in music"; "Franz Peter Schubert"; "Robert Schumann"; "Felix Mendelssohn"; "Frédéric Chopin."

The Washington Academy of Sciences was sponsor for a series of 5 popular lectures delivered in the auditorium on March 18 and 25, and April 1, 8 and 15, as follows: "The volcano Kilauea in action," by Dr. Arthur L. Day; "Nematodes, their relations to mankind and to agriculture," by Dr. N. A. Cobb; "High explosives and their effects," by Prof. Charles E. Munroe; "Insects and their relation to disease," by Mr. W. D. Hunter; and "The earth," by Dr. R. S. Woodward. Under the joint auspices of the same organization and the Biological Society of Washington, two lectures were given, on January 19 and March 11, respectively. The first, by Dr. John Hjort, Commissioner of Fisheries of Norway, was on the subject of "Migrations and fluctuations of the marine animals of western Europe"; the second, by Mr. Wilfred H. Osgood, of the Field Museum of Natural History, on "Fur seals and other animals on the Pribilof Islands." The former was illustrated by lantern slides, the latter by the same and by moving pictures. The Washington Society of the Archaeological Institute of America provided two illustrated lectures, one on December 12, by Prof. Walter Dennison, of Swarthmore College, treating of "The battlegrounds of Julius Caesar in France and Belgium"; the other, on March 19, by Mr. Frank Edward Johnson, on "The Phoenician and Roman art treasures of Tunisia." Under the Audubon Society of the District of Columbia two lectures on bird life were given, one on January 26 by Mr. Gorst,

the other, on April 6, by Mr. T. G. Pearson, Secretary of the National Audubon Society.

The National Academy of Sciences, during its annual meeting from April 19 to 21, 1915, made use of the auditorium for its public sessions for the reading of scientific papers. Included in the programme were two lectures under the William Ellery Hale foundation, entitled "The evolution of the earth," by Prof. Thomas Chrowder Chamberlin, of the University of Chicago. On the evening of April 19, after the first lecture, the audience repaired to the picture gallery and the rotunda for a conversazione. The annual meeting of The American Fisheries Society was held in the new building from September 30 to October 3, 1914, mainly in the committee rooms, but on two afternoons the salmon industry of the Pacific coast was illustrated in the auditorium by means of moving pictures. The Nineteenth International Congress of Americanists, which had been scheduled to meet in the Museum from October 5 to 10, 1914, was indefinitely postponed on account of the war conditions in Europe, but the organizing committee having charge of the arrangements held two meetings during the year. The honorary scientific society of the Sigma Xi met on February 19 and March 5, 1915, and the Council of the American Association for the Advancement of Science was given accommodations for a session on April 20, 1915. The twelfth annual convention of the National Rural Letter Carriers' Association had the use of the auditorium and committee rooms from August 11 to 15, 1914, the foyer also being utilized for an exhibition of small mail wagons for rural service, cartons, etc., for parcel post use, rural mail boxes, and other objects of interest to the members of the convention. Under the auspices of the Virginia Postmasters' Association, a joint convention of postmasters from Delaware, Maryland, Virginia, and North and South Carolina was held in the auditorium from October 5 to 7, 1914. It was supplemented by an exhibit of containers for shipping various kinds of articles by parcel post.

One of the most important features of the year was the illustration of marine life below the surface of the sea by means of moving pictures. Taking advantage of a collapsible tube designed for submarine work, the photographer has been able to picture submerged objects in a manner not heretofore recognized, and the exhibition proved a revelation suggestive of many possibilities. The series shown was part of an extensive film made at the Bahama Islands by The Submarine Film Corporation, under whose auspices and at whose expense the exhibition was held, being given for the benefit of the scientific men in the Government service. It was the first time that these films had been publicly exhibited, and so great was the demand for admission that two sessions were called for on

the same day, July 16, 1914, at which the combined attendance amounted to 1,350 persons. Besides coral, algal and other reef illustrations, the film included several special and more spectacular features.

Two receptions were given by the Regents and Secretary of the Institution. The first, on April 17, 1915, was in honor of the National Society of the Daughters of the American Revolution, and followed a lecture in the auditorium, under the auspices of the Society, on "The City of Washington," by Mr. Clayton E. Emig. Music was furnished by the Marine Band. The second was to the delegates to the Sixth Annual Convention of the American Federation of Arts, then in session at the New Willard Hotel, and was held on May 13. In view of the extensive loan exhibition of industrial art assembled in the foyer under the auspices of the Federation, the guests were received there, but a part of the main exhibition floor was also lighted and visited.

A number of meetings were held by branches of the Department of Agriculture and by others interested in agricultural matters. Under the Rural Economics Club of the Department a lecture on the "Effect of war on agriculture" was delivered on August 17, 1914. The Office of Farm Management Investigations of the Bureau of Plant Industry was furnished with accommodations for a series of meetings on November 5, 6 and 7. The American Farm Management Association had the use of the auditorium and other rooms on November 9 and 10. The office of Markets and Rural Organization held hearings on November 12, 13 and 14, relative to the rules governing the enforcement of the United States Cotton Futures Act. A series of 12 Saturday lectures under the auspices of the Bureau of Plant Industry were given between December 19 and March 20.

SPECIAL EXHIBITIONS.

The principal special exhibition of the year was one held under the auspices of The American Federation of Arts, as described below. Under the National Gallery of Art will be found an account of another very important loan exhibition made by The National Association of Portrait Painters. A subject in which all are interested, the erection of a George Washington Memorial Building, was brought to the attention of the public by the display from May to December, 1914, of all the designs submitted in competition for this proposed structure, those of the successful architects remaining until January, 1915, and for a short period a large colored drawing depicting the exterior appearance of the building under the accepted plans was also shown. The collection of the National Red Cross Society, described in previous reports, was retained on exhibition

until May, 1915, when it was temporarily placed in storage to make room for other special purposes, but it will soon be returned to its former place. The models of the Pedro Miguel Locks and the Gatun Dam Locks of the Panama Canal were withdrawn by the Department of War during most of the year, but for several months they occupied their customary position in the foyer of the new building.

Though not actually of the nature of public exhibition, it may be mentioned that one of the courts in the new building has from time to time been used for the display of samples of stone submitted by competitors for the construction of public buildings. Such exhibitions have been of extreme interest to geologists, but of more direct importance has been the opportunity afforded of acquiring additions to the building stone collection of the Museum, contractors generally having been very generously disposed in this respect. The stones submitted during the past year were for the Red Cross Building, a memorial to the women of the Civil War, and for the Memorial Amphitheatre at Arlington, Va.

The exhibition first referred to above, planned and assembled in the name of The American Federation of Arts, relates wholly to industrial art and is entirely restricted to American products. It is considered to be one of the most notable displays of its kind ever held in this country, and while not claiming to be complete, it is remarkably comprehensive and very representative. There is an exceedingly wide range of exhibits, and though the exhibitors were allowed to make their own selections, there being no jury and but few specially invited participants, the standard upheld is extremely high. From first to last the exhibition emphasizes two things, the value of beauty in design and the fine quality of artistic products now being made in the United States. Organized as an object lesson for the public, it demonstrates that the useful can be beautiful, and that art has its practical place in almost every phase of life.

Committees were appointed on behalf of both the Federation and the Museum to give direction to the enterprise, but it is only just to say that the idea originated with the secretary of the Federation, Miss Leila Mechlin, who has also borne the brunt of the work. The Museum furnished the space and the cases, and assisted in the installation and to a slight extent in soliciting materials. The place allotted for the purpose is on the ground floor of the new building near the north entrance, comprising a part of the lobby, the entire foyer and five rooms of varying size opening into the latter, two on the east and three on the west side. The exhibition was so planned as to be ready for inspection during the spring convention of The American Federation of Arts, and was opened on the evening of May 13, 1915, with a special view and a reception to the delegates. It will continue until the middle of September.

It is expected that some form of catalogue will be issued by the Federation. In this connection only a brief and very general review of the exhibition can be given, but it is desired to emphasize the fact that this splendid array of materials is in a line with one of the Museum's most important branches, in which certain valuable collections have already been assembled.

The first of the exhibits encountered in approaching from the north entrance. consists of tapestries, which occupy the south side of the lobby and extend on to the walls at both ends. Not only are wall hangings, both large and small, shown, but also several pieces of furniture, chairs and sofas, and two screens, all of American design and tapestry covered. These materials came from four makers, the Herter looms, the Baumgarten looms, Pottier & Stymus, and the Edgewater looms, all of which are located in or near New York. The fabrics were woven on hand looms in precisely the same way that the greatest of the world's tapestries have been made, and practically with the same object in view—that of artistic decoration. Some of the designs are copies of old patterns, while others are new and by American designers. The colorings are very interesting and the texture is pleasing.

The adjoining foyer or great hall, measuring about 147 feet long by 53 feet wide, has been filled with cases extending in rows through the middle and, with the addition of some screens, placed between the piers and against the walls at the sides. In this area are the main exhibits of glass and pottery, and displays of many other classes of objects, such as textiles, silver, iron, copper and bronze work, jewelry, electric lamps, bookbinding, etc. The display of glass is exceedingly extensive and occupies a main position in the foyer. The largest, consisting of cut glass, is furnished by the Libbey Glass Co., of Toledo, Ohio, and comprises many beautiful examples, both as to design and workmanship, well illustrating to what a high state of excellence this almost exclusively American industry has been carried. Dorflinger & Sons, of White Plains, Pa., show some very interesting pieces of both cut and engraved glass, while among other contributors are H. C. Mueller, of Yonkers, N. Y., and T. G. Hawkes & Co., of Corning, N. Y. A unique exhibit, sent by Mrs. Sarah Ryel Comer, of Dorchester, Mass., consists of glass and porcelain exquisitely colored with iridescent tints, recalling the soap bubble by the transparency of color and delicacy of tone. A representative collection of their favrile glass, of a type unlike that which is commercially current, is the contribution of the Tiffany Sudios, of New York. It is chiefly exhibited in the American living room, where two tall and some smaller vases stand on the high shelf of the mantel, while other beautiful examples are shown in a cabinet. In the foyer just outside

the door of this room are two interesting panels, designs in color for mosaics of Tiffany glass.

The pottery makers make a wonderful showing, one that must be surprising to those who have not in recent years followed the development of this important craft. Every variety of form and color seems now to be produced in this country, and much of the work turned out is of great artistic worth. Each, furthermore, has its distinguishing characteristics. The industry appears to be pretty well scattered through the United States, for in this exhibition examples have come from as far south as New Orleans and as far west as Colorado, not a few from New England and a fair share from the Middle West, and in each instance native clays are used. Some specially interesting and unique specimens have been contributed by the Poillon Pottery at Woodbridge, N. J. These are in large part reproductions of ancient examples, such, for instance, as a beaker jug, 2,200 B. C., and a few designs of a Cretan dinner set dating from 2,200 to 1,500 B. C., besides other pieces notable in form and color. The Pewabic Potteries, of Detroit, which have also produced some remarkable examples comparable with the best of ancient times, are represented by a few choice pieces, while the Fulper Potteries have furnished an excellent group in which are particularly noticeable several pieces of an exquisite red—"famille rose"—fine in shape and beautiful in color gradation. The Rookwood, one of the oldest and best known of American potteries, has sent an excellent display, as has also the Sophie Newcomb Pottery, of New Orleans; and, in addition, the Van Briggle, Paul Revere, Moravian and Enfield potteries are all charmingly and well represented.

All of the above are for the most part makers of vases, jars, tiles and the like. From the Dedham Pottery have come tableware, plates, bowls, etc., interestingly decorated in repeated, original patterns, in a single color; and from the Lenox chinamakers in Trenton, N. J., a display of fine porcelain very beautifully decorated. The latter locality is the one place in America where china comparable to that made in England and France is being produced.

The display of silver ware and jewelry, while limited, is representative of the best both in workmanship and design. George E. Germer has sent an alms basin and a chalice beautifully designed and wrought; George Blanchard, four dozen pieces of flat table silver made by hand; Arthur Stone, 14 pieces very finely designed and made; George E. Gebelein, a coffee urn lent by its present owner; and S. E. Lamprey & Co., other excellent examples. Handmade jewelry is contributed by Frank Gardner Hales, Mrs. Josephine Hartwell Shaw and Miss Margaret Rogers; an assortment of effective designs in silver and shell, unique in character, by Carl Schon, of Baltimore; and a very interesting group of enamels, by Miss

Elizabeth Copeland. There are also some interesting examples of bookbinding, leather work, by Miss Eleanor Sweringen, Miss Marion Lane and Miss Elsie Ingle; baskets by Mrs. Helen Tanquary Smith; and lamps and other objects by various contributors.

Beginning now with the rooms opening from the foyer, the first of these on the east side, which measures about 36 by 30 feet and contains two large windows and two doors, has been given over to a most charming and instructive exhibit. No single class of objects is specifically on display, but selections from the various kinds deemed necessary to obtain harmony and elegance, to secure comfort and pleasurable effect, have been combined and arranged in a manner to demonstrate the possibilities of American manufacture toward satisfying the most fastidious tastes in the furnishing and equipment of a family living room. It is the most gratifying form of exhibition in showing, in the lesson designed to be taught, the actual utilization of American art products, with the added suggestion of a manner of applying them. The scheme, originating with the editors of "Good Furniture," was carried out in detail and elaborated by Mr. William Laurel Harris, an associate editor of that magazine and a well-known mural painter. The result has proved an unqualified success, due to the friendly cooperation of 35 different artists, craftsmen, business houses and manufacturers. All of the furniture came from Grand Rapids makers, the drapery silks were woven at the mills of the Cheney Brothers, and the rugs were made by an American Persian rug manufactory. There are pictures on the walls and examples of sculpture, favrile glass and pottery, besides some stenciled and embroidery work.

Drawing upon a descriptive account of the room, published elsewhere, it may be said that the general tone is of a golden brown, rich in color, on a cool gray plaster wall. The dominant effect is obtained largely by the use of silks with woven tapestries and panels of richly tooled leather, painted and gilded. On these deep warm tones the objects of art in bronze, pottery and favrile glass take on an added lustre and develop a singular charm. An unusual feature which adds much to one's pleasure at night are the shades for the electric fixtures, made of parchment and heavy leather cut in patterns and decorated with gold and color. This same note of sumptuousness and magnificence is repeated on the four sides of the room. The gold of the leather enhances the golden tones of the silk curtains, which, with their rich brocade of a Jacobean character, are not only very handsome in themselves but represent one of the most characteristic industries of an artistic nature that America has produced. The woven tapestries on the walls are charming in their quiet texture and lend themselves to the general scheme of decoration. They are deserving of the highest commendation. The

splendid mantel is exhibited by a craftsman specializing in such work and it was he who also furnished the remarkable fire irons so richly wrought in Jacobean design and pattern. The mantelpiece, skilfully made and carved, brings the spectator a step nearer the actual furniture as distinguished from the silks, tapestries, ornamented leather and other articles that are commonly called house furnishings. To really enjoy each piece of furniture one must actually see it, handle it or sit on it. Then and only then, is one properly able to appreciate and understand the resources of American designers and furniture makers.

The pictures, by well known artists, were taken from the National Gallery of Art with the exception of three, the work of Mr. William H. Holmes, curator of that Gallery, which were lent by him for the occasion. The sculpture includes pieces by Mr. Richard Brooks, Mr. H. K. Bush-Brown and Mr. Phimister Proctor. There are embroidered table covers by Miss Bush-Brown, and two embroidered silk fire screens by Mrs. Seward H. Rathbun. The larger screen, representing a peacock, gives an interesting note in contrast with the black fire irons and the dark woodwork of the fireplace. This note of iridescent color is repeated and emphasized by the favrile glass designed by Louis Tiffany. Two large vases, based on the peacock motive, furnish a striking and exquisite decorative note on the high shelf of the mantel. The overmantel panel is an elaborate composition of decorative flowers, painted on leather, with an undertone of metallic lustre. A big vase on the hutch between the doors is a wonderful example of the potter's art and again recalls, in a higher key, the sumptuous note of the mantel composition, emphasizing, by its handsome contrasts, the gold and silver of the leather on the wall behind. So, from one end of the room to the other, and from the ceiling to the floor, the exhibitors have combined and cooperated to obtain a dignified and harmonious arrangement of form and color.

The textiles other than those shown in the lobby and in the American living room have been mostly assembled in the large room adjoining the latter. Ten rugs, rich in color and handsome in design, contributed by Whittall, of Worcester, Mass., cover the walls, while in cases are displayed drapery silks, upholstery goods, dyed stuffs, embroideries and laces. The Orinoka Mills sent a comprehensive and valuable exhibit comprising materials of very artistic quality and excellent texture. The Cheney Brothers furnished not only examples of finished product, but also the designs and enlarged patterns illustrating how the weaving is done. The European Textile Company, of New York, shows several pleasing examples of wood block printing, similar in spirit and style to that formerly done in Austria; and Peter Myer, of New York, has contributed

some extremely interesting and, in a measure, odd fabrics showing Batik decorations. There are beautiful dyed fabrics from Neighborhood House in Washington, and also from Mr. Pellew, of New York. The Quaker lace manufactory of Philadelphia has supplied some remarkably fine and lovely machine laces, while handmade lace has come from Minnesota and from the School of Italian Workers in New York. Linens woven abroad from American designs are exhibited by McCutcheon, of New York, and exquisite ecclesiastical embroidery is shown by Mrs. Halsey Wood, of the same city.

In the most southern room on the west side of the foyer, allotted to the exhibition, the Gorham Company has installed an exceptionally rich and important collection of works in bronze and the precious metals and in stained glass. In the following room is a display by the School of Fine Arts of the Pennsylvania Museum of Industrial Art, a very extensive and comprehensive exhibit, including work in iron, pottery, leather, wood carving, jewelry, illustration, mural decoration and costume design. Not only is student effort shown, but that of graduates as well, with the result of demonstrating that a high standard has been set and upheld. In the third and final room is an exhibit prepared by the Art in Trades Club, of New York, illustrating art in house furnishing and decoration, a series of designs by Miss Sallie T. Humphreys showing not only the design but also the material produced therefrom—wall papers, bronzes, lamps and furniture. The room likewise contains some exceptionally interesting iron work from F. Kraser & Co., Samuel Yellin, the John Williams Co. and Googherty & Co. I. Kirehmayer, of Boston, has a little statuette of a Madonna in wood carving, which has been wrought with the skill and feeling of medieval work; while Conrad Scapecchi contributes some delightful works in gesso, graffito and illumination.

EXPOSITIONS.

The sundry civil act for 1914, approved June 23, 1913, authorized the exhibition at the Panama-Pacific International Exposition at San Francisco in 1915 of "such articles and materials as illustrate the function and administrative faculty of the Government of the United States tending to demonstrate the nature and growth of our institutions, their adaptation to the wants of the people, and the progress of the Nation in the arts of peace and war," and created a Government Exhibit Board to consist of three members, to be appointed by the President from the executive departments. The Board constituted under the latter provision consists of Hon. A. C. Miller, chairman, Dr. S. W. Stratton and Prof. F. Lamson-Scribner. The President also designated Mr. W. de C. Ravenel as secretary to

the Board, Mr. J. C. Boykin as assistant to the chairman, Mr. T. J. Taylor as disbursing officer and Mr. R. E. Shannon as transportation agent.

For the "purpose of inaugurating, installing, maintaining and returning said Government exhibits, together with all other necessary expenses of every kind connected therewith" Congress appropriated the sum of $500,000, of which amount the Smithsonian Institution was allotted $23,750 for the preparation and maintenance of its exhibit, besides 6,200 square feet of floor space in the Liberal Arts Palace. In this connection Mr. W. de C. Ravenel, administrative assistant of the National Museum, was appointed by the Secretary of the Institution the representative of that establishment and of its several governmental branches, and after consultation with the Government Board, it was decided to devote the greater part of the available funds to the presentation of ethnological subjects.

The most prominent features of this ethnological exhibit are four large family groups, patterned after those so well known to visitors to the National Museum but specially prepared for the exposition. They represent typical tribes in four widely separated regions, namely, the western or Alaskan Eskimo, which, on account of the better food supply and the milder climate, have advanced farther than their relatives in the East; the Zulu-Kaffir which, with the related Bantu tribes, live in the semi-arid southern extremity of the African continent; the Caribs of the interior of British Guiana, South America; and the Dyaks who live along the rivers of the interior of the Island of Borneo. The figures for these were modeled by Mr. U. S. J. Dunbar, sculptor, of Washington. Next comes a series of dwelling groups, reproduced in miniature, illustrating the architecture and village life of the western Eskimo, the Zulus, the Caribs, the Dyaks, the Jamamadi Indians of western Brazil, the Aino of the Island of Yezo, Japan, the early Hawaiians, the Navaho Indians of New Mexico and Arizona, the Chippewa Indians of the Lake Superior region, the Iroquois Indians of northern New York, and the Seminole Indians of Florida. In 16 cases are installed several hundred original objects obtained from the Indians and representing the arts, industries, domestic life, sports, etc., of the Eskimo, mainly of Alaska, the tribes of the northwest coast of North America, the South American tribes, including those of British Guiana, the Panama Indians, the Africans, the Dyaks of Borneo and the tribes of New Guinea. Supplementing the above are many photographic enlargements, and pictures of other kinds; and additional to it are several synoptical series of objects, illustrating the history of fire making and illumination, of the jackknife, of the saw, of the spindle, of the shuttle, of the hafted stone ax and the perforated stone ax.

Outside of ethnology the only exhibit of specimens consists of a splendid group of the common elk or wapiti of the Rocky Mountain region, comprising one individual each of the male, female and young. The specimens were obtained in the Yellowstone National Park, through the courtesy of the Secretary of the Interior, and were mounted by Mr. James L. Clark, of New York. This preparation was made in cooperation with the Biological Survey and is displayed in the Palace of Agriculture. In order to illustrate the important Museum exhibits in anthropology, biology and geology, an extensive series of lantern slides was made to be shown by means of a stereomotorgraph machine.

The parent institution and its other branches are all likewise represented by pictures, publications, charts, photographs, instruments, and more especially by an exact reproduction of the Langley experimental aeroplane which was successfully flown on the Potomac River, near Quantico, Va., on May 6, 1896, the first demonstration of the possibility of flight by a heavier than air machine.

The representative of the Institution received the hearty cooperation and assistance of all members of the staff in charge of the subjects that are illustrated, and as regards the Museum the most exacting duties in this respect naturally fell upon the head curator of anthropology, Mr. Holmes, and the curator of ethnology, Dr. Hough. At the time of the opening of the exposition, February 20, 1915, the exhibits of the Institution and its branches had been entirely installed and labeled.

The Panama-California Exposition at San Diego, Cal., also designed to celebrate the completion of the Panama Canal, was opened on January 1, 1915, and will continue during the entire calendar year. Its organization and maintenance are under local management, and though combining many features, that in which the Museum is most deeply interested is the illustration of man and his progress from earliest prehistoric times to the present. This part of the exhibition is housed in a permanent building and will be retained perpetually as a museum for San Diego. While not participating in this exposition in the same manner as at San Francisco, the Institution and Museum have aided very materially in the assembling of the anthropological collections, under plans drawn up in cooperation with the exposition officials and Dr. E. L. Hewett, director of exhibits. Two exhibits were prepared under the auspices of the Institution and the Museum, and both were successfully completed. The expenses were defrayed by the exposition, and while the collections brought together were, in greater measure, to become its property, a certain part of the material as well as the scientific results of the necessary expeditions were to accrue to the Institution.

The first of the exhibits referred to illustrates the physical history of man, to which purpose the sum of $27,000 was allotted, the work being placed in charge of Dr. Aleš Hrdlička, curator of physical anthropology in the National Museum. The second has for its object the presentation of certain of the important industries of American aborigines, and received the attention of Mr. William H. Holmes, head curator of anthropology in the National Museum, to whom an allotment of $5,000 was made. The work of collecting and preparation was begun in 1912, and involved the making of extensive series of casts and of other exhibits, besides the carrying out of a number of important expeditions which extended to various parts of the world, being mainly conducted by Dr. Hrdlička himself, though in some instances by others under his direction. These explorations have resulted in the securing of valuable anthropological information, which has already been discussed in Smithsonian and other publications.

The exhibit relating to the physical history of man has, through the intelligent effort of Dr. Hrdlička, been made to surpass considerably in richness, instructiveness and harmony, anything before attempted in this line. It is installed in five halls of moderate size, four of which are severally devoted to the following subdivisions of the subject, namely, the evolution of man, or his phylogeny; the development or growth of man, or his ontogeny; the racial, sexual and individual variations of man; and the causes which, outside of strict normal senility, contribute to the decline of the human organism, and in the vast majority of cases cause death, these causes being, in fact, disease and injury. The fifth hall is fitted up as an anthropological laboratory, with equipment and a library, and for use as a lecture room. The exhibit of the arts and industries of American aborigines consists primarily of six lay figure groups representing, respectively, the mining of iron ore and pigment materials; the mining of copper; the quarrying of soapstone; the quarrying of obsidian; the quarrying of building stone; and the arrow makers. These groups are supplemented by extensive series of the implements, utensils and art works generally of these ancient peoples. Provision has been made for replicas of certain of these groups and of other important antiquities for exhibition in the National Museum, which also acquires valuable skeletal and other materials from Peru, Alaska, Siberia, Mongolia and Bohemia.

ORGANIZATION AND STAFF.

The principal change during the year in the organization and staff of the Museum had reference to the divisions of mollusks and marine invertebrates which were, for economical and administrative reasons, combined, on October 16, 1914, in a single division under the

latter title. Had there been sufficient funds it would probably have been more advantageous to increase than diminish the number of divisions, or at least to have organized several sections, a course fully warranted by the heterogeneous character of the collections which have been classed under the term marine invertebrates, including, as they have, several classes, and materials from the fresh waters and the land as well as from the sea. The divisions of mollusks and marine invertebrates have obtained their resources from the same or similar sources, their collections have increased to an enormous extent, and their consolidation was the only solution of the problem of securing a closer supervision of the many groups without an increase in the number and expense of the staff. There were also other circumstances leading to the change, among them the contemplated resignation of the executive assistant curator of the division of marine invertebrates. The mollusks remain in charge of Dr. William H. Dall, honorary curator, who has been their sponsor for so many years, with the same assistance as before. The curatorship of the division was assumed by Dr. Paul Bartsch, previously assistant curator of mollusks, and on the same date, October 16, Mr. W. B. Marshall was promoted from aid to assistant curator. The resignation of Miss M. J. Rathbun, for many years assistant curator of marine invertebrates, who desired to give her entire time to research work, became effective December 31, 1914, and on January 11, following, she was designated by the Secretary as an associate in zoology. Her position as assistant curator was filled by the appointment on January 1 of Mr. Waldo L. Schmitt, previously a scientific assistant in the Bureau of Fisheries.

Mr. Paul R. Myers, aid in the division of insects, resigned on August 31, 1914; and Mr. G. P. Van Eseltine, aid in the division of plants, on April 30, 1915. Dr. C. H. T. Townsend, of the Bureau of Entomology, was designated honorary custodian of muscoid diptera on January 22, 1915. Prof. John O. Snyder, of Leland Stanford Junior University, who was engaged as expert ichthyologist in a revision of the large collection of fishes, was obliged to leave on December 31, 1914, to take up his college duties, after a year spent in Washington to the great advantage of the Museum. Mr. George de S. Canavarro, of the Forest Service, was appointed assistant curator of the section of wood technology on June 11, 1915, from which date this branch of the Museum's activities has been specifically recognized; and on January 1, the title of the superintendent of construction and labor, Mr. J. S. Goldsmith, was changed to superintendent of buildings and labor.

During the year the Museum staff suffered the loss of two of its distinguished members, Dr. Theodore N. Gill, deceased on September 25, 1914, and Dr. Albert C. Peale, who died on December 5, 1914.

Dr. Theodore Nicholas Gill was an associate in zoology in the National Museum and for many years a leading figure in scientific activities. He was born in New York City, March 21, 1837, the son of James Darrell and Elizabeth Vosburgh Gill, and received his early training from private schools and special tutors in that city. It was the desire of his parents that he should devote himself to the service of the Church and his early schooling was therefore directed to the classical studies with emphasis on Greek and Latin. It was found, however, that his inclination did not trend toward clerical service and he was assigned to the legal profession and read law diligently for some time, but never applied for admission to the bar.

Visits to the Fulton fish market in New York and the wharves where sailing vessels returning from distant cruises would bring curious animals from foreign ports, and the meeting with some of the early collectors and amateur naturalists excited his fancy and stimulated in him a love for natural history and the desire to devote himself to this field. We thus find him, in early youth, seeking and obtaining a scholarship at the Wagner Free Institute of Science in Philadelphia, which yielded him the meagre means that enabled him to pursue his studies in natural history, and to come in contact with that group of men who laid the foundation of American science.

It was in the winter of 1857 that he came to Washington to gain additional knowledge, before sailing to the West Indies to collect shells and other natural history objects for Mr. D. Jackson Stewart. The collections which he made on this visit to Barbados, Trinidad and other islands of the West Indian group were reported upon in the Annals of the Lyceum of Natural History of New York, and in the Proceedings of the Philadelphia Academy of Natural Sciences. During the preparation of these reports he had free access to the splendid library of J. Carson Brevoort, where most of his comparisons and critical studies were made. His next expedition was a visit to Newfoundland, which laid the foundation for his Northern Boundary report in 1860.

In 1861 he settled in Washington where his ability was promptly recognized and he was given charge of the library of the Smithsonian Institution, and when that was transferred to the Capitol in 1866 he continued in the service there until 1874, serving for a time as Assistant Librarian of Congress.

Shortly after coming to Washington he became connected with Columbian College (now George Washington University) where he occupied the chair of Zoology until 1910 when he was made emeritus professor. Here his services were appreciated not only by his students but also by the University, as attested by the fact that it bestowed upon him the degree of master of arts in 1865, doctor of

medicine in 1866, doctor of philosophy in 1870 and doctor of laws in 1895.

Rarely does one find, as in the present instance, the more or less accidental early phases in the groping for a career converge in such a manner as to at once become useful and necessary. Dr. Gill's early training was a most fortunate one, for the splendid classical schooling of his youth gave him a complete familiarity with Greek and Latin, and his legal knowledge, combined with the former, rendered him a judge where questions of nomenclature were involved. His subsequent library training brought him in contact with the world's literature, and this, yoked with great industry and a phenomenal memory, made him the acknowledged master in his chosen field. It also produced a breadth of knowledge that rendered him a fountain of information and, as someone has stated, "With the simplicity of the truly great and the truly able he gave freely of his stores of knowledge, so that to all the investigators who came in contact with him, he proved an ever ready source of exact and reliable information and a sound adviser." It is certain there are few workers in systematic biology in Washington and many other places who have not received assistance from Dr. Gill.

Dr. Gill's published zoological writings, covering more than 500 titles, are chiefly devoted to fishes. Here, as in his other studies, his efforts were largely directed to the production of a natural classification. His "Arrangement of the Families of Fishes" (1872), although considered decidedly radical when first propounded, is now generally accepted. He not only possessed the ability to accomplish systematic work, but he had the rare gift to render scientific facts available to the layman by presenting them in language both simple and charming. This is splendidly exemplified by his papers on "Parental Care among Freshwater Fishes" and "Contributions to the Life Histories of Fishes."

In addition to the many papers which he contributed to the Smithsonian Institution, the National Museum and the Proceedings of the Philadelphia Academy of Natural Sciences, he wrote most of the volume on fishes and much of that on mammals for the Standard Natural History, the zoological part of Johnson's Universal Cyclopedia and the zoological text of the Century and Standard dictionaries. His greatest excellence, however, was that of scientific critic, when his statements, though frank and fearless, were always friendly.

Dr. Gill's contributions to science were widely recognized and brought him honorary election to more than seventy-five scientific societies in the United States and abroad. In our own country he was a member of the National Academy of Sciences, the American Academy of Arts and Sciences, the American Philosophical Society,

the American Ornithological Union and the American Association for the Advancement of Science. Of the last he was president in 1897. He was also one of the ten founders of the Cosmos Club of Washington.

Dr. Gill, though one of the most profoundly learned men of his time, was characterized by innate modesty and gentleness, lacking personal vanity and ostentation.

Dr. Albert Charles Peale, aid in charge of the paleobotanical collections in the National Museum, died in Philadelphia on December 5, 1914, in his sixty-sixth year. Dr. Peale was born at Hecksherville, Pa., on April 1, 1849. He was trained as a physician, receiving his degree of doctor of medicine from the Medical School of Pennsylvania in 1871, but never practiced the profession. In this same year he became connected with the U. S. Geological and Geographical Surveys of the Territories under Dr. F. V. Hayden, continuing with that organization until the consolidation of the various independent surveys into the U. S. Geological Survey under Dr. Clarence King, of which he also was a member until 1898. Shortly after the latter date he was appointed to the staff of the National Museum, where he remained until the time of his death.

Dr. Peale was a faithful and conscientious worker, and was in close touch with Dr. Hayden, having his confidence in geological and official affairs throughout his entire administration. He was a man of remarkable memory for detail, and could recall with surprising accuracy observations made many years before. While with the newly organized Survey, under Maj. Powell, he prepared for publication the manuscript of the Three Forks Folio of Montana, the first of the new Geologic Atlas series to be submitted but not the first to be issued. It is no exaggeration to state that this work compares favorably with any done before or since, and remains a worthy illustration of his painstaking accuracy. For many years Dr. Peale was the official authority on mineral waters, a subject in which he first became prominent in connection with his work on the thermal springs of the Yellowstone National Park. He was a member of the American Chemical Society, the Academy of Natural Sciences of Philadelphia, the Philosophical, Geological and Chemical Societies of Washington, the National Geographic Society, and the Society of Colonial Wars.

THE MUSEUM STAFF.

[June 30, 1915.]

CHARLES D. WALCOTT, Secretary of the Smithsonian Institution, Keeper *ex officio*.

RICHARD RATHBUN, Assistant Secretary, in charge of the United States National Museum.

W. DE C. RAVENEL, Administrative Assistant.

SCIENTIFIC STAFF.

DEPARTMENT OF ANTHROPOLOGY:

William H. Holmes, Head Curator.

Division of Ethnology: Walter Hough, Curator; Neil M. Judd, Aid; J. W. Fewkes, Collaborator; Arthur P. Rice, Collaborator.

Division of American Archeology: William H. Holmes, Curator; E. P. Upham, Aid; J. D. McGuire, Collaborator.

Division of Old World Archeology: I. M. Casanowicz, Assistant Curator.

Division of Physical Anthropology: Aleš Hrdlička, Curator; R. D. Moore, Aid.

Division of Mechanical Technology: George C. Maynard, Curator.

Division of Graphic Arts: Paul Brockett, Custodian; Ruel P. Tolman, Aid.

Section of Photography: T. W. Smillie, Custodian.

Division of History: A. Howard Clark, Honorary Curator; T. T. Belote, Assistant Curator.

Associates in Historic Archeology: Paul Haupt, Cyrus Adler.

DEPARTMENT OF BIOLOGY:

Leonhard Stejneger, Head Curator; James E. Benedict, Chief of Exhibits.

Division of Mammals: Gerrit S. Miller, jr., Curator; Ned Hollister, Assistant Curator.

Division of Birds: Robert Ridgway, Curator; Charles W. Richmond, Assistant Curator; J. H. Riley, Aid.

Division of Reptiles and Batrachians: Leonhard Stejneger, Curator; R. G. Paine, Aid.

Division of Fishes: Barton A. Bean, Assistant Curator.

Division of Insects: L. O. Howard, Honorary Curator; J. C. Crawford, Associate Curator.

Section of Hymenoptera: J. C. Crawford, in charge.

Section of Myriapoda: O. F. Cook, Custodian.

Section of Diptera: Frederick Knab, Custodian.

Section of Muscoid Diptera: C. H. T. Townsend, Custodian.

Section of Coleoptera: E. A. Schwarz, Custodian.

Section of Lepidoptera: Harrison G. Dyar, Custodian.

Section of Orthoptera: A. N. Caudell, Custodian.

Section of Hemiptera: Otto Heidemann, Custodian.

Section of Forest Tree Beetles: A. D. Hopkins, Custodian.

Division of Marine Invertebrates: Paul Bartsch, Curator; William H. Dall, Honorary Curator of Mollusks; Waldo L. Schmitt, Assistant Curator; Austin H. Clark, Assistant Curator; William B. Marshall, Assistant Curator; C. R. Shoemaker, Aid; H. K. Harring, Custodian of the Rotatoria; Harriet Richardson Searle, Collaborator; Mary Breen, Collaborator.

Section of Helminthological Collections: C. W. Stiles, Custodian; B. H. Ransom, Assistant Custodian; P. E. Garrison, United States Navy, Assistant Custodian.

DEPARTMENT OF BIOLOGY—Continued.

Division of Plants (National Herbarium): Frederick V. Coville, Honorary Curator; W. R. Maxon, Associate Curator; P. C. Standley, Assistant Curator.

Cactaceæ, Crassulaceæ, and Miscellaneous Mexican Collections: J. N. Rose, Custodian.

Section of Grasses: Albert S. Hitchcock, Custodian.

Section of Cryptogamic Collections: O. F. Cook, Assistant Curator.

Section of Higher Algæ: W. T. Swingle, Custodian.

Section of Lower Fungi: D. G. Fairchild, Custodian.

Section of Diatoms: Albert Mann, Custodian.

Associates in Zoology: C. Hart Merriam, W. L. Abbott, Edgar A. Mearns, United States Army (retired), Mary J. Rathbun.

Associates in Botany: Edward L. Greene, John Donnell Smith, J. N. Rose.

Collaborator in Zoology: Copley Amory, jr.

DEPARTMENT OF GEOLOGY:

George P. Merrill, Head Curator.

Division of Physical and Chemical Geology (Systematic and Applied): George P. Merrill, Curator; James C. Martin, Assistant Curator.

Division of Mineralogy and Petrology: F. W. Clarke, Honorary Curator; Edgar T. Wherry, Assistant Curator; Douglas B. Sterrett, Custodian of Gems and Precious Stones.

Division of Paleontology: R. S. Bassler, Curator.

Section of Invertebrate Paleontology: T. W. Stanton, Custodian of Mesozoic Collection; William H. Dall, Associate Curator of Cenozoic Collection; T. Wayland Vaughan, Custodian of Madreporarian Corals.

Section of Vertebrate Paleontology: James W. Gidley, Assistant Curator of Fossil Mammals; Charles W. Gilmore, Assistant Curator of Fossil Reptiles.

Section of Paleobotany: David White, Associate Curator; F. H. Knowlton, Custodian of Mesozoic Plants.

Associates in Paleontology: Frank Springer, E. O. Ulrich.

DIVISION OF TEXTILES:

Frederick L. Lewton, Curator.

Section of Wood Technology; George de S. Canavarro, Assistant Curator.

DIVISION OF MINERAL TECHNOLOGY:

Chester G. Gilbert, Curator; C. W. Mitman, Aid.

NATIONAL GALLERY OF ART:

William H. Holmes, Curator.

ADMINISTRATIVE STAFF.

Chief of Correspondence and Documents, R. I. Geare.

Disbursing Agent, W. I. Adams.

Superintendent of Buildings and Labor, J. S. Goldsmith.

Editor, Marcus Benjamin.

Editorial Clerk, E. S. Steele.

Assistant Librarian, N. P. Scudder.

Photographer, T. W. Smillie.

Registrar, S. C. Brown.

Property Clerk, W. A. Knowles.

Engineer, C. R. Denmark.

LIST OF ACCESSIONS TO THE COLLECTIONS DURING THE FISCAL YEAR 1914–1915.

[Except when otherwise indicated, the specimens were presented, or were transferred by bureaus of the Government in accordance with law.]

ABBOTT, Miss GERTRUDE, Philadelphia, Pa.: Skull of a Norwegian red deer (57639).

ABBOTT, Dr. W. L.: About 225 mammals, 14 birds, a shell, snake, and 3 ethnological specimens, from Kashmir (57237); about 272 mammals, 270 birds, 29 fishes, 30 marine invertebrates, 100 reptiles, and 22 ethnological specimens, collected by Mr. H. C. Raven in Dutch East Borneo (57327; 57458); 11 mammals from Kashmir and Norway (57866).

ABERCROMBIE, Miss. (See under Mrs. Thomas Hamilton Wilson.)

ADAMS, Prof. CHARLES C., New York State College of Forestry, Syracuse, N. Y.: Collection of fresh-water mollusks of the genus *Io*, embracing the types and other specimens upon which the donor's paper upon this genus, published by the National Academy of Sciences, is based (57271).

ADDISON, A. D., Washington, D. C.: A hornet's nest showing blue stripe, due to use of blue paper in making the nest (58238).

ADELAIDE SILK MILLS, Allentown, Pa.: Specimen of warp-printed silk showing a portion of the warp without any filling (57156).

AGRICULTURE, DEPARTMENT OF:

Bureau of Biological Survey: 123 specimens of Orthoptera, representing 28 species (57150); 50 eggs and 11 nests of birds, from Arizona (57189; 57261; 57448); 9 living specimens of Cactaceae collected by Mr. Ernest G. Holt in Arizona and Nevada (57206; 58383); earthworms collected by Mr. William C. Jacobsen in Modoc National Forest, Cal. (57377); 40 specimens of plants, chiefly from Wyoming, collected by Mr. Vernon Bailey and Mr. Merritt Cary (57452), 36 collected principally in Texas by Mr. Bailey (58355); 3 living specimens of Cactaceae, collected in Nevada by Mr. E. A. Goldman (57578; 57671); 83 specimens of plants collected in Arizona by Mr. Goldman (58136); skeleton of ruby-crowned kinglet, *Regulus calendula* (57673); fresh-water shells, mainly from Nevada and Utah (57991); 6 specimens of fishes (5 of *Cymatogaster aggregatus* and 1 of *Enophrys bison*), collected by Mr. W. L. McAtee at Oyster Bay, Wash., and 125 specimens of plants collected in various parts of the United States by Mr. McAtee (58100; 58122); 99 specimens of plants collected in Porto Rico by Mr. Alex. Wetmore (58122); 94 birds, osteological material, chiefly from Arizona (58221); 40 skins, 136 skulls and 4 skeletons of seals; 9 skins, 21 skulls, 1 hunter's skin and 9 alcoholic specimens of mammals, from the Old World and from southern South America (58242); 11 North American mammals (58311); earthworm from Christoval, Tex., collected by Dr. A. K. Fisher (58318); 97 Orthoptera and 139 Coccinellidæ (58363); 40 specimens of plants from Colorado, collected by Mr. S. E. Piper (58404); 88 reptiles and 30 batrachians (58483).

AGRICULTURE, DEPARTMENT OF—Contd.

Bureau of Entomology: 4 batrachians and 5 lizards, from Texas (57197); 31 vials of miscellaneous insects (57407); 200 specimens of Hymenoptera, representing about 80 species and including types of 69 species (57411), and 292 dragonflies from West Virginia, collected by Mr. R. P. Currie, received from the Branch of Forest Insect Investigations (58065); about 3,500 Diptera, 100 bred Diptera, 1,000 miscellaneous insects and 30 vials of alcoholic material, collected by Mr. R. C. Shannon in the vicinity of Washington, D. C. (57692; 57800); 221 slides of muscoid maggots and eggs, collected in 1909; 725 vials of female reproductive systems in rough, muscoid maggots and eggs (Florida and South Carolina, 1908, 1909); 117 vials of complete reproductive systems, male and female, dissected out (New England, 1914); 903 pinned muscoid flies from New England, including over 100 from which dissections have been made; all collected by Dr. C. H. T. Townsend (57894); 72 dragonflies from Chesapeake Beach, Md., and 924 from the vicinity of Washington, D. C., collected by Mr. R. P. Currie and Miss Bertha Currie; 30 dragonflies from the vicinity of Washington, collected by Mr. V. A. Roberts and Mr. H. L. Nichols (58063); 74 named European insects, sent to the Bureau by Mr. H. du Buysson of Vernet, Allier, France (58361); 1 European and 12 American specimens of Diptera, *Oscinis* sp., determined by Mr. J. M. Aldrich (58463).

Bureau of Plant Industry: 4 specimens of gums, 3 of vegetable wax and 1 of starch (57277); 11 land shells, representing 2 species, from the loess near Tchan-tcho, China (57288); 240 specimens of plants from the western part of the United States and 2 from Ciudad Juárez, Mexico, collected by Prof. E. O. Wooton (57306; 57582; 57615; 57627; 57758; 58356), 44 from Costa Rica (57398; 57986), 1 from Washington (57398); 2 specimens of rushes, *Juncus*, from New York (57422); 19 specimens of plants from the United States and 2 from the Canal Zone, collected by Mr. O. F. Cook (57509; 57582; 57716; 57859; 57981; 58153); 274 collected in Guatemala and British Honduras by Mr. Cook and Mr. C. B. Doyle (57509); an exhibit of waste from standardized Upland cotton, comprising samples of picker waste, card waste and No. 22's warp yarn obtained from the five standard full grades of raw Upland cotton (57544); 6,000 duplicate specimens of grasses (57588); 17 specimens of plants from New York (57716), 69 from Brazil (57728), 11 collected in Florida by Prof. S. M. Tracy (57758); 4 specimens of ferns collected in Texas by Mr. C. S. Scofield (57810); 50 specimens of plants collected in Wisconsin by Mr. C. J. Humphrey, 625 from British Columbia, Alberta, and the northwestern part of the United States, collected by Prof. A. S. Hitchcock (57868), 364 collected in Idaho by Mr. Henry J. Rust (57882); 12 specimens of thorns, *Crataegus*, from Michigan (58153); 988 specimens of plants principally from California and Idaho, 529 chiefly from Utah and 404 from Arizona, all collected by Mr. W. W. Eggleston (58160; 58181; 58272); 1,297 mounted specimens of grasses from various sources (58160); 10 living specimens of Cactaceae collected in Arizona and California by Dr. H. L. Shantz (58184); 1,100 specimens of plants collected in Colorado and California by Dr. Shantz and Mr. R. L. Piemeisel (58372), 26 collected in Utah and Arizona by Mr. L L. Harter (58280); 9 species of land shells collected by Mr. Frank N. Meyer on mountain slopes 4,000 to 8,000 feet, near Siku, Kansu, China; also concretions of siliceous sand cemented

AGRICULTURE, DEPARTMENT OF—Contd.
by lime carbonate from near Sarepta, Saratoff Government, Russia (58358); 10 specimens of ferns from Florida (58392).

AGUIRRE, Dr. RAFAEL TEJADA, Guatemala City, Guatemala: 96 specimens of plants from Guatemala (57706; 58098).

AIKEN, Rev. JAMES, St. Catherines, Berbice, British Guiana: Fish parasites, leeches, isopods, ostracods, a mollusk, and drawings of a copepod (57558).

ALDRICH, J. M., Bureau of Entomology, Washington, D. C.: 4 specimens of Diptera, *Chætophleps setos*, from Lafayette, Ind. (57187).

AMERICAN FEDERATION OF ARTS, Washington, D. C.: 23 paintings by contemporary foreign artists (58479: loan for special exhibition).

AMERICAN GRAPHOPHONE COMPANY, Bridgeport, Conn.: A Grafonola Favorite equipped with electric motor and automatic stopping machine, together with 8 double disk and 1 single disk records (58301).

AMERICAN MILLS COMPANY OF NEW YORK, THE, New York City: Specimens of elastic webbing (58389).

AMERICAN MUSEUM OF NATURAL HISTORY, New York City: Skeleton of a gray whale, received through Mr. Roy C. Andrews (58056: purchase); casts of a lower jaw, tooth, and 13 scutes of glyptodont, *Chlamytherium*, by permission of Dr. E. H. Sellards, State Geologist, Tallahassee, Fla. (58116); 11 lantern slides illustrating fossil reptiles (58198: exchange); skins and skulls of 34 mammals (58227: exchange).

AMERICAN TRIPOLI COMPANY, Seneca, Mo.: 14 specimens of tripoli and tripoli products, and 6 photographs showing mine, drying sheds, etc. (57490).

AMERICAN VANADIUM COMPANY, Pittsburgh, Pa. (through Mr. Frank L. Hess): A specimen of ferro-vanadium, made from the patronite ores of Minasragra, Peru (58315).

AMES, LEWIS ANNIN, New York City: A bronze, guest's badge of the "New York Tercentenary" celebration commemorating the three hundredth anniversary of the inception of New York City as a commercial center (57748).

AMOSKEAG MANUFACTURING COMPANY, Manchester, N. H.: A series of specimens, machines and photographs illustrating the spinning, weaving and finishing of cotton cloth; a series of specimens and photographs showing the successive steps in the manufacture of a blue serge from raw wool; specimens illustrating the manufacture of a Vigoreaux worsted fabric; United States flag, 7 feet by 14 feet, made of Panama cloth; part of a loom, consisting of warp, harness, reed and bags, showing the process of weaving seamless bags; samples of seamless cotton bags (57814); 53 samples of cotton, cotton-flannel and worsted fabrics and 9 "ready-to-wear" garments made from the same materials (58459).

ANDERSON, WESLEY G., Principal of Schools, Metolius, Oreg.: A small piece of diatomaceous earth (57997).

ANDERSON, WILLIAM, AND COMPANY, New York City: 11 samples of cotton wash fabrics, including zephyr ginghams, percales and white dress goods (57808).

ANZELL, ALEXANDER A., New York City (through Mr. Douglas B. Sterrett): 4 dental tools and a mixing slab made of agate (57362).

APOLLINAIRE-MARIE, Brother, Instituto de La Salle, Bogotá, Colombia: 150 specimens of plants from Colombia (58186; 58309).

ARMBRUSTER, RAYMOND, Cumberland, Md.: 4 skulls of small fossil mammals (57920: exchange).

ARMSTRONG, EUGENE, Noti, Oreg.: 16 specimens of Labrador tea, *Ledum columbianum*, from Oregon (57655).

ARMSTRONG, Miss MARY G., Calexico, Cal.: 8 spiders, *Ercmobates* sp. (57149; 58466).

ARNOLD ARBORETUM, HARVARD UNIVERSITY, Jamaica Plain, Mass.: 560 specimens of plants from the United States (57877: exchange).

ARTHUR, Dr. J. C., Agricultural Experiment Station, Purdue University, Lafayette, Ind.: Specimen of phanerogam, *Sphaeralcea*, from New Mexico (57646).

ASBESTOS CORPORATION OF CANADA, LIMITED, Montreal, Canada: 6 specimens of asbestos (57596).

ASBESTOS PROTECTED METAL COMPANY, Beaver Falls, Pa.: 6 specimens of asbestos (57837).

ASCHEMEIER, CHARLES R., U. S. National Museum: 13 squirrels and 4 birds' skins, from Maryland (57341; 58099; 58148).

ATLAS COAL COMPANY, THE, Rich Hill, Mo.: A lump of coal (58085).

ATTWATER, H. P., Houston, Tex.: 3 birds' nests, including 1 of Bullock's oriole (*Icterus bullocki*), and 3 eggs, including 1 of the poorwill (*Phalœnoptilus nuttalli nuttalli*), all from Texas (57157; 57347; 58077; 58317).

BACHTELL, W. L., Milford, Utah: A specimen of opalescent agate (58377: purchase).

BAILEY, HAROLD H., Newport News, Va.: Land shells from Giles County, Va., some of which were obtained at an altitude of 4,200 feet (57270; 58357).

BAILEY, VERNON, Bureau of Biological Survey, Washington, D. C.: Specimen of beetle, *Peltophorus seminiveus*, from flower stem of *Yucca palmeri*, Globe, Ariz. (58061).

BAKER, B. P., Alamogordo, N. Mex.: 10 specimens of plants from New Mexico (58493).

BAKER, Prof. C. F., University of the Philippines, Los Banos, P. I.: 16 insects (57473: loan).

BAKER, C. H., Orlando, Fla.: 2 specimens of a tree, *Pterospermum* (58393).

BAKER, Dr. F. H., Richmond, Victoria, Australia: Echinoid, *Goniocidaris tubaria*, dredged in the Bass Straits between Victoria and Tasmania (57315); 45 specimens of land and marine shells, representing 10 species, from Australia (57329: exchange).

BAKER, Dr. FRED., Point Loma, Cal.: Moths, reptiles, fishes, and crustaceans, from Japan (57459; 57660); insects, fishes, crustaceans, and reptiles, from Formosa (57968; 58113).

BALDWIN, R. L., Chadds Ford, Pa.: Specimen of unicorn plant, *Martynia louisiana*, from Pennsylvania (57437).

BALL, C. R., Bureau of Plant Industry, Washington, D. C.: 36 specimens of plants, chiefly willows (57737).

BALSS, Dr. H., Zoologische Sammlung des Bayerischen Staates, Munich, Germany: 2 specimens of crustacean, *Harpilius depressus* (57468).

BALTIMORE, CITY OF (through Hon. James H. Preston, mayor): Commemorative tablet medal, designed and made by Hans Schuler, in recognition of the transfer of Fort McHenry from the Government of the United States to the City of Baltimore, under Act of Congress approved by the President May 27, 1914 (57518); bronze medal, designed and made by Hans Schuler, commemorative of the Star Spangled Banner Centennial Celebration, Baltimore, September 6 to 13, 1914 (57586).

BANKS, NATHAN, Bureau of Entomology, Washington, D. C.: About 90 named ants from Australia (58058).

BANTA, Dr. A. M., Cold Spring Harbor, Long Island, N. Y.: 2 specimens of salamander from New York (58018).

BARBER, H. S., Bureau of Entomology, Washington, D. C.: 2 specimens of mole, *Scalopus aquaticus*, from Plummer's Island, Md. (57342).

BARBOUR, Dr. THOMAS, Museum of Comparative Zoölogy, Cambridge, Mass.: A rare lizard, *Cricosaura typica*, from Cuba (57742).

BARNES, GEO. E., Washington, D. C.: 127 crustaceans from a small pool near Chain Bridge, Md. (58190).

BARNETT, V. H., Washington, D. C.: Skull of an otter, from China (58273).

BARTELS, J. M., COMPANY, New York City: 42 United States stamped envelopes and postage stamps of Cuba (58125); 7 United States stamped envelopes and 10 Canal Zone stamps (58509). Exchange.

BARTLETT, PAUL W., Washington, D. C.: Original model, in plaster, of the bronze equestrian statue of Lafayette, erected in the Square of the Louvre, Paris, France, by the school children of the United States, 1900; Paul W. Bartlett, sculptor (57392).

BARTOLO, ANTHONY DI, Washington, D. C.: Geological material from northeastern Sicily (57185).

BARTSCH, PAUL, U. S. National Museum: Leopard skin, *Felis pardus*, from Ceylon (57387). (See under John B. Henderson.)

BATES MANUFACTURING COMPANY, Lewiston, Me.: 8 samples of cotton crêpe dress goods (57847).

BEALS, Mrs. W. G., Lake Valley, N. Mex.: 244 specimens of plants from New Mexico (57400; 57423; 57890; 57969; 58048; 58450).

BEAN, Prof. R. B., Medical School, Tulane University, New Orleans, La.: Anatomical specimens (57220).

BECK, JOHN S., Washington, D. C.: Portrait of George Washington, attributed to Charles Willson Peale (57236: loan).

BELL, Dr. ALEXANDER GRAHAM, Washington, D. C.: Desk telephone set, 1877; Dr. Bell's official pass to the Centennial Exhibition, Philadelphia, 1876; ticket of admission to his lectures on telephony (57371); experimental phonographic and graphophonic apparatus (57694; 58498).

BELL, Sir H. HESKETH J., Governor, Leeward Islands, Antigua, British West Indies (through Dr. T. Wayland Vaughan): 3 samples of green rock from Antigua (57744).

BEMENT, CLARENCE S., Philadelphia, Pa. (through Dr. F. W. Clarke, Washington, D. C.): A slice from the Willamette meteorite, weighing 1,954 grams, and 3 specimens of minerals (2 phenacites and 1 tarbuttite) (58246).

BENJAMIN, Dr. MARCUS, U. S. National Museum: A reduced facsimile of the official medal recently issued by the New York Tercentenary Commission commemorating the Commercial Tercentenary of New York, 1614–1914 (57782).

BENNETT, A., Croydon, England: Photograph of a new species of pondweed, *Potamogeton* (58486: exchange).

BENNETT AND ASPDEN COMPANY, Manayunk, Philadelphia, Pa. (through Mr. W. E. Rosenthal, New York City): 2 samples of fabrics manufactured from ramie (57723).

BENNETT, Dr. O. J., Pittsburgh, Pa. (through Mr. W. F. Dismer, Washington, D. C.): Homing pigeon "Old Bob" (57614).

BENT, A. C., Taunton, Mass.: 14 bird skins from Alaska and Manitoba (57676).

BERGROTH, Dr. E., Turtola, Finland, Russia: 40 specimens of parasitic Hymenoptera (57141).

BERT, WALTER L., Baltimore, Md.: Original appointment of Hugo Fulda as drum major of the Fifth Regiment, Maryland Volunteers in the service of the United States, dated May 8, 1862; also a Colt's revolver (57326).

BERWIND-WHITE COAL MINING COMPANY, Philadelphia, Pa.: Lump of coal (58082).

BEST & JACOBY, New York City: 3 specimens of silk ribbons manufactured from artificial silk and cotton (58322).

BETHEL, Prof. ELLSWORTH, Denver, Colo.: 3 specimens of ferns from Colorado (57320).

BEUTENMÜLLER, WILLIAM, New York City: 8 cotypes of gallfly, *Rhodites californicus* (57799).

BEZZI, Prof. Dr. M., Turin, Italy: 86 named adults of European, African, Indian and Philippine muscoid flies, together with pupæ of three species (58062: exchange).

BIRD, HENRY, Rye, N. Y.: Paratype each of moths, *Papaipema humili* and *P. silphii* (58465).

BIRDSEYE MARBLE COMPANY, Salt Lake City, Utah: 2 polished slabs of marble and 3 pieces in the rough (57539).

BLANCHARD, C. H., Salt Lake City, Utah: Gold slide for watch guard. Presented in 1862 by Capt. (afterward Gen.) Philip Sheridan, U. S. Army, to Miss Kate E. Houghton, who later became the wife of the donor, Mr. Blanchard (57685).

BLODGETT, Mrs. HARRIETT E., Brockport, N. Y.: 2 bedspreads, made during the early part of the 19th century (58478).

BLOSS, Mrs. FREDERICK S., Troy, N. Y.: An oil painting (57620: loan).

BLOSSBURG COAL COMPANY, Scranton, Pa.: A lump of coal (57908).

BLUMENTHAL, SIDNEY, AND CO., INC., New York City: 10 specimens of cloaking and upholstery plushes (57751).

BOBLETT, SAM, Prescott, Ariz.: Teeth of an extinct species of American Pleistocene horse (57954).

BOERICKE, HAROLD, Vanadium, Colo. (through Mr. Frank L. Hess): Roscoelite vein and sandstone from Primos Chemical Company's mine, San Miguel County, Colo. (58316).

BOLTON, THEODORE, Washington, D. C.: Korean horsehair hat and hatbox (57304: purchase); 11 specimens of halftones and rapid rotary intaglios from The Illustrated London News (57864).

BONSALL, The Misses ETHEL, SARAH W., ELISABETH F. and MARY W. (through Miss Elisabeth F. Bonsall, Philadelphia, Pa.): Relics of their father, Amos Bonsall, a member of the Second Grinnell Expedition in search of Sir John Franklin, 1853–1855, under the direction of Dr. E. K. Kane (58128).

BOONE, Miss PEARL L., U. S. National Museum: 14 species of Miocene fossils and 12 species of land and marine shells, from near Wicomico Church, Va. (57457); about 100 specimens of crustaceans, ascidians, annelids and mollusks, from the west coast of Chesapeake Bay, Northumberland County, Va. (57804).

BORDEAUX, INTERNATIONAL MARINE EXPOSITION OF, 1907, Bordeaux, France: Diploma awarded to the U. S. National Museum in recognition of its exhibit at the Exposition (57393).

BOYCE, A. L., New Dorp, Staten Island, N. Y.: Specimen of "robber fly," *Erax* sp. (57180).

BOYD, Mrs. M. E., South Hanover, Mass.: 28 kinds of modern laces (58399: loan).

BRADLEY, WILLIAM, AND SON, Long Island City, N. Y.: 31 samples of foreign and domestic marbles (58501).

BRANDEGEE, T. S., University of California, Berkeley, Cal.: 32 specimens of ferns from Mexico (57735); 205 specimens of plants collected in Mexico by Mr. C. A. Purpus (58217: purchase).

BRASSEUR, CHARLES L., Orange, N. J.: 2 color-photographs on ruled-screens (58334: loan).

BRAUN, Miss ANNETTE F., Cincinnati, Ohio: 65 Microlepidoptera, including cotypes of some new species (57895).

BRETON, Miss ADELA C., Philadelphia, Pa.: A hand-colored engraving of a mural painting of lower part of roof (vault), south end of Inner Chamber, Temple A, Ball Court, Chichen Itza, Yucatan, Mexico (58033).

BRIGGS, FARNHAM E., Minnieville, Va.: A large amethyst crystal from Prince William County, Va. (58171: exchange).

BRIMLEY, C. S., Raleigh, N. C.: 2 turtles from North Carolina and 4 from Florida (57854; 57973). Purchase.

BRIND, W. L., Bergenfield, N. J.: 5 specimens of pigmy sun-fish, *Elassoma zonatum* (58344).

BRINKMAN, A. H., Craigmyle, Alberta, Canada: 182 specimens of Canadian mosses and liverworts (57167: purchase).

BROADWAY, W. E., Belmont, Trinidad: 150 specimens of plants from Tobago (57530: purchase); 13 specimens of plants from Tobago (57530; 57645).

BROCKETT, PAUL, Smithsonian Institution: 97 book plates and 28 poster stamps (57999); a silver 5-lei piece of Roumania, issued in 1906, commemorating the fortieth anniversary of the accession of Charles I (58255). Loan.

BROCKUNIER, S. H., Nevada City, Cal. (through Mr. Frank L. Hess): A specimen of ferberite-bearing pegmatite from Arizona (57743).

BROOKLYN INSTITUTE OF ARTS AND SCIENCES, CENTRAL MUSEUM, Brooklyn, N. Y. (through Dr. Robert Cushman Murphy): 6 echinoderms, representing 4 species, from South Georgia, consisting of a type specimen of *Anasterias octoradiata*, 3 specimens of *Psolidium ? convergens*, and a specimen each of *Anasterias ? studeri* and *Odontaster validus* (58507).

BROOMHEAD, HOWARD H., Paris, Idaho: 2 fossil shells (58229).

BROWN, EDWARD J., Los Angeles, Cal.: 4 bird skins from Falls Church, Va. (57785); 36 bird skins, 3 nests, a small series of reptiles and batrachians and a bat, from Los Angeles County (58174).

BROWN, Mrs. GLENN, Washington, D. C.: Pair of gold and jeweled earrings bearing the initial "M," owned by Rebecca Madison, niece of President James Madison, wife of Reynolds Chapman and grandmother of Mrs. Brown. Presented to Rebecca Madison by Mrs. Mossom, wife of Rev. Mr. Mossom; also a silver spoon and silver fork made in France and owned by President Madison (58107: loan).

BROWN, Mrs. JOHN CROSBY, New York City: A Javanese (?) musical instrument (58019).

BROWN, Capt. JOHN NEWTON, Nassau, Bahamas: 7 corals, including 5 specimens of *Mcandrina mœandrites*, 1 of *Manicina gyrosa* and 1 of *Acropora prolifera* (57258).

BROWN, SAMUEL K., Los Angeles, Cal.: Skin of laughing gull, *Larus atricilla*, from Smith's Island, Va. (57784).

BROWN, W. T. WATKINS, Sydney, New South Wales: 20 obsidianites, obsidian bombs, or Australites, from New South Wales (58342: purchase).

BRYAN, Maj. H. S., Zanesville, Ohio: Mexican silver coin, 1822 (57386: loan).

BRYAN, Prof. WM. ALANSON, Honolulu, Hawaii: 31 specimens of coral, representing about 30 species, collected by Mr. Carl Elschner around Fanning Island, central Pacific Ocean (58455).

BRYAN, Hon. WILLIAM JENNINGS, Washington, D. C.: A "Peace Treaty" paperweight (a miniature plowshare and beam), identical with those given by Mr. Bryan to the Ambassadors and Ministers who signed with him thirty treaties providing for investigation of all disputes (57778).

BRYS, VICTOR, Washington, D. C.: A Belgian (cover) envelope with a 40-centime stamp of 1866 attached, and with the Royal Seal on back (58042).

BUCHANAN, Miss MARY S., Winchester, Va. (through Mrs. R. G. Hoes): Costume worn by Betty, daughter of

Buchanan, Miss Mary S.—Continued. President Zachary Taylor, illustrative of the costumes worn at the White House during her father's administration (1849–1850), consisting of a dress and kerchief of sage-green silk grenadine with border of Scotch plaid in colors, trimmed with moss fringe, a collarette of white lace and black ribbon-velvet, a pair of black silk mitts, and a fine linen handkerchief with the name "Betty" embroidered in one corner (57687: loan).

Buckingham, Mrs. E. H., Chevy Chase, Md.: A New Zealand carved paddle (58336: loan).

Bulkley, Hon. Robert J., Cleveland, Ohio: Nest of a hornet (58240).

Bull Valley Gold Mines Company, Salt Lake City, Utah (through Mr. Victor C. Heikes): A specimen of gold in calcite (58382).

Burke, J. J., Cloverport, Ky.: Wheelbug, *Arilus cristatus* (57467).

Burt, Miss Elizabeth B., Washington, D. C.: A sextant and a surveyor's compass (58359: loan).

Busck, August, Bureau of Entomology, Washington, D. C.: Skull of spotted cavy, *Cuniculus*, and skin and skull of monkey, *Cebus*, from Panama (58237).

Busck, Wilhelm. (See under George Chestnut.)

Bush, B. F., Courtney, Mo.: 290 specimens of plants from Missouri (57140; 57960). Purchase.

Bushnell, Mrs. Belle, Washington, D. C.: A porcelain match box with bust of Benjamin Franklin on the cover, from Paris, France (57850).

Calcutta, India. (See under Indian Museum.)

California Academy of Sciences, San Francisco, Cal.: 452 specimens of plants from California (57924; 58461). Exchange.

California Asbestos Company, San Francisco, Cal.: A 10-pound specimen of asbestos (57832).

California, University of, Berkeley, Cal.: 5 specimens of plants from California (57715); fragments of 6 types of phanerogams, *Chenopodiaceae* and *Amaranthaceae* (57745); a composite skeleton and 3 skulls and lower jaws of Pleistocene dogs from the La Brea, Cal., asphalt deposit (58435). Exchange.

Callender, Miss A. B., Middlebury, Vt.: 22 specimens of sedges, *Carex*, from Vermont (57956).

Cameron, H. F., Zamboanga, P. I.: Photograph of a shark, *Rhinodon typicus*, caught in a trap on the coast of the island of Cebu (58457).

Cameron Machine Company, Brooklyn, N. Y.: A series of specimens showing the various kinds of materials and shapes of packages produced by the Cameron slitting and rewinding machine (58024).

Camp, R. D., Brownsville, Tex.: Reptiles, batrachians, mammals, a mollusk and an insect, from Texas (58170; 58337).

Canada, Biological Board of, Pacific Coast Station, Nanaimo, British Columbia (through Mr. C. McLean Fraser): 2 specimens of crinoid, *Floromctra serratissima*, collected at Nanaimo (58500).

Canada, Geological Survey of, Ottawa, Canada (through Dr. E. M. Kindle): 23 species of marine shells from the coast of Nova Scotia (58165).

Canal Zone, Board of Health Laboratory, Ancon (through Dr. S. T. Darling): 9 snakes from Panama (57554).

Canfield, F. A., Dover, N. J.: A specimen of roepperite in weathered manganocalcite, from Sterling Hill, N. J. (57888).

Cannon, Prof. George L., Denver, Colo. (through Dr. O. P. Hay): 36 bones of Pleistocene mammals (57963).

Cape Town, Union of South Africa. (See under South African Museum.)

CARBORUNDUM COMPANY, THE, Niagara Falls, N. Y.: Miscellaneous collection of carborundum and aloxite, and their products; also 16 photographs representing different departments in the work (57873).

CARNEGIE INSTITUTION OF WASHINGTON: Living specimen of cactus, *Echinocactus polyacanthus*, collected in California by Mr. S. B. Parish (57145); 12 living specimens of cactus from Tobago, West Indies, and 2 living specimens of *Selaginella*, collected in Arizona by Dr. Forrest Shreve (57574); 3,000 plants, 5 boxes of land shells, 116 invertebrate specimens, 2 mammals, a fish and 2 lizards, obtained by Dr. and Mrs. J. N. Rose in western South America (57801); 2 living specimens of giant cactus, *Carnegica gigantea*, collected in Arizona by Dr. D. T. MacDougal (58104).

Department of Marine Biology, Tortugas, Fla. (through Dr. Alfred G. Mayer, director): About 1,000 specimens of corals from the Bahamas and Florida (57259); a large collection of land shells from the Bahama Islands (57269).

CAROZZI, G. NAPOLEONE (through Mrs. Mary W. Carozzi, Portland, Oreg.): 3 violins (57562).

CARSON, H. M., General superintendent, Erie Division, Pennsylvania Railroad Co., Williamsport, Pa.: A 3-part car-coupling link (57224).

CARTWRIGHT, ALFRED, Guayaquil, Ecuador (through Frederic W. Goding, Esq., American consul general): Collection of insects, mostly Lepidoptera (58462).

CASH, Miss L. C., Bureau of Plant Industry, Washington, D. C.: Amphipods and mollusks from near Tadousac, Quebec (57495).

CASSERLY, W. W., Goodyears Bar, Cal.: Sample of asbestos (57833).

CAWSTON OSTRICH FARM, South Pasadena, Cal.: A collection of the various grades of raw, bleached and dyed ostrich feathers (57661).

CENTERVILLE BLOCK COAL COMPANY, Centerville, Iowa: One cube of coal (58521).

CENTRAL COAL AND COKE COMPANY, Kansas City, Mo.: Lump of coal (57913).

CENTRAL MUSEUM, THE BROOKLYN INSTITUTE OF ARTS AND SCIENCES. (See under Brooklyn.)

CHACE, E. P., Los Angeles, Cal.: Mollusks, consisting of 3 specimens of *Melampus* from Alamitos Bay, Cal., and 21 specimens of *Paphia staminea* from Anaheim Bay, Cal. (57471; 58038).

CHACE, Mrs. E. P., Los Angeles, Cal.: Marine shells from Anaheim Bay, Cal. (57761; 57959); specimens of *Adula stylina* from Long Beach and San Diego, Cal. (57984); 12 specimens, representing 4 species, of marine shells from the vicinity of San Pedro, Cal. (58434).

CHADWICK, Miss JULIA HALSTED, Washington, D. C.: 4 crucifixes and an icon, an old porcelain rice bowl with cover, and a tea set, cloisonné on porcelain (58167: loan).

CHAFFEY, Miss M. E., El Paso, Tex.: 6 living cacti, collected near El Paso (57146).

CHAMBER OF COMMERCE, Deming, N. Mex. (through Dr. J. W. Fewkes): A vertebra of a mammoth (57334).

CHANDLER, H. P., Rio Hondo, Tex.: 85 specimens of plants from Texas (57164: purchase).

CHANDONNET, Rev. Z. L., Perham, Minn.: 160 specimens of plants, chiefly *Laciniaria*, from Minnesota (57753: purchase).

CHAPMAN, The Misses FLORENCE and MARY K., Staunton, Va. (through Miss Florence Chapman): Gold breastpin containing a lock of President Madison's hair and inscribed "In memory of my uncle, James Madison, J. A. C.," originally owned by James Alfred Chapman, father of the lenders; pair of gold cuff buttons owned by Rev. David Mossom, who performed the marriage cere-

CHAPMAN, The Misses FLORENCE and MARY K.—Continued.
mony of Gen. Washington, in 1759 (58108: loan).

CHAPMAN, ROBERT H., Washington, D. C.: About 250 specimens of marine mollusks, from various localities (57730).

CHENEY BROTHERS, South Manchester, Conn.: 7 samples of printed silks (58458).

CHESTNUT, GEORGE, and WILHELM BUSCK, Hyattsville, Md.: 63 dragonflies from the vicinity of Hyattsville (58064).

CHILE, EMBASSY OF, Washington, D. C. (through Señor Don Eduardo Suárez-Mujica, Ambassador extraordinary and plenipotentiary of Chile): An oil painting by Alfredo Helsby, entitled "Full Moon" (Landscape at Limache, Chile) (58508).

CHILE, MUSEO NACIONAL DE, Santiago, Chile: 21 specimens of Cactaceae from Chile (57697: exchange).

CHILES, Mrs. J. H., West Palm Beach, Fla.: 16 living plants, mostly Cactaceae (58114: exchange).

CHRISTIAN, L. F., Lockhart, Tex.: Samples of alunite (?) (57494).

CHRISTOPHERSON, E. D., Racine, Wis.: 12 lots of plankton, from the Canal Zone (57375).

CINCINNATI ZOOLOGICAL COMPANY, Cincinnati, Ohio: Passenger pigeon, *Ectopistes migratorius* (57354).

CLAPP, E. D., Washington, D. C.: An English silver case watch (57282).

CLAPP, GEORGE H., Pittsburgh, Pa.: 2 species of mollusk, *Bifidaria*, from Arizona, part of type lots (57328); 2 specimens, cotypes, of mollusk, *Polygyra cohuttensis*, from Cohutta Mountains, Ga. (57613: exchange); 15 specimens, paratypes, of mollusk, *Vitrea cryptomphala*, from Knox County, Tenn. (58235).

CLAPP, W. F., Museum of Comparative Zoölogy, Cambridge, Mass.: 2 land shells, *Strophiops clappii*, from the Bahamas (58016).

CLARK, A. HOWARD, Smithsonian Institution: A photograph of the commission of George Washington as Commander-in-Chief of the Continental Army (57217).

CLARK, AUSTIN H., U. S. National Museum: 49 crinoids, consisting of 10 specimens of *Antedon petasus*, 38 of *A. bifida*, and 1 of *Ophiopholis aculeata*, from Port Erin, Isle of Man (58389).

CLARK, B. PRESTON, Boston, Mass.: About 50 South American hawkmoths, Sphingidæ, not represented in the Museum collections (58187).

CLARK, Miss EMILY, Hamilton, N. Y.: 22 shells from Africa (58015).

CLARK, HERBERT E., Jaffa Gate, Jerusalem, Palestine: 12 chipped flint hand axes from the valley west of Samaria; 5 chipped flint chisels from Abou, Samaria; a chipped flint hammer from Rafaat; and a chipped flint chisel from Beit Taneh (57311).

CLARK, Dr. HUBERT L., Museum of Comparative Zoölogy, Cambridge, Mass.: Crinoid, *Lamprometra gyges*, from Papua (58189).

CLARK, H. WALTON, U. S. Biological Station, Fairport, Iowa: Three specimens of plants from Iowa (57497).

CLARK, JAMES L., New York City: 102 mammal skulls, consisting of 95 specimens from Africa (more than one-half of which are large), 6 from Canada and 1 from the New York Zoo; a skin of an African mammal (57364; 57455; 58135: exchange); a young African buffalo (58469: purchase).

CLARKE, Dr. F. W. (See under Clarence S. Bement and Foulk Jones and Sons.)

CLARKE, Mrs. F. W., Washington, D. C.: Ivy pitcher (57231: loan).

CLARKE, Miss GRACE OLMSTED, Washington, D. C. (through Mrs. R. G. Hoes): Apron made by Miss Derby at Salem, Mass., eighty years ago (57223: loan).

CLARKE, MORTIMER, jr., Linden, Md.: Statue of an Egyptian god (cast from a specimen in the Louvre) (57537).

CLAYTON, Dr. CHARLES F., Balkan, Ky.: Stag beetle, *Lucanus elaphus* (58513).

CLINTON COAL COMPANY, Clinton, Ind.: Lump of coal (58087).

CLOSSON, WILLIAM BAXTER PALMER, Newton, Mass.: An oil painting by himself, entitled "The Angel" (58421: loan).

CLOUGH, L., East Concord, N. H.: A specimen of triphylite from Grafton Center, N. H. (58397).

COCKERELL, Prof. T. D. A., University of Colorado, Boulder, Colo.: 5 specimens of mollusk, *Planorbis parvus*, from an altitude of 8,435 feet, Mt. Lake, Gresham, Colo. (57268); and insects as follows—78 vespoid and sphecoid Hymenoptera collected in Guatemala by Mrs. Cockerell, some of the species being undescribed; also 12 miscellaneous insects (57406); a bee, *Cœlioxys angelica* (57709); 49 specimens, including 2 types and 8 cotypes (58059); types of 79 species and allotypes of 5 of these; cotypes of 2 species; an allotype of a species not represented by type; and specimens of 6 other determined species (58362).

CODWISE, Miss LOUISE SALTER, Kingston, N. Y.: Additions to "The Louise Salter Codwise Collection," as follows: Relics of the Salter and Codwise families of New Jersey and New York, both of Colonial and Revolutionary history, consisting of jewelry, silverware, and other objects (57226); 15 specimens—miscellaneous objects of art (58302); an ermine fur coat and an East Indian silk scarf owned during the period of the Civil War by Elizabeth Rogers Codwise, grandmother of the lender (58476). Loan.

COHEN, Mrs. EDWARD, Washington, D. C.: Tan satin empire gown which belonged to Mrs. Samuel Myers, of Richmond; bodice of painted cambric, 1830–1838, worn by Mrs. Samuel Hays Myers (58304); sampler (58305: loan); portions of costumes of the latter part of the 18th and the early part of the 19th centuries (58417: loan); pair of shoe buckles, brilliants set in silver and gold, owned during the latter part of the 18th, or the early part of the 19th, century by Mr. M. M. Myers of Richmond, Va. (58472: loan); 3 pieces of white lace (58475).

COLLINS, F. S., North Eastham, Mass.: 50 specimens of algae from North America, Phycotheca Boreali-Americana, Fascicle XL (57281); 50 specimens of lichens, Phycotheca Boreali-Americana, Fascicle XLI (58371). Purchase.

COLMAN, H. F., Washington, D. C.: 105 Canal Zone and 9 Philippine Island postage stamps (57356: exchange); 146 United States stamps, issues of 1869, 1902, 1908, 1910, 1912 and 1913; and 22 Philippine Island stamps (57519: exchange); 530 British Colonial 20th century stamps (57700: exchange); 346 foreign stamps (57764: exchange); 51 United States stamps (57765: exchange); 102 foreign and United States stamps (57929: exchange); 4 Canal Zone stamps, a new issue in commemoration of the opening of the Panama Canal, 1, 2, 5 and 10 centesimos values; and a Samoan envelope, 20 pfennigs, surcharged "2½ d. G. R. I." (58102).

COMMERCE, DEPARTMENT OF:

Bureau of Fisheries: Rag fish, *Zaprora silenus*, taken in the Pacific Ocean, by Capt. Andrew Weiding, and a specimen of lump fish, *Cyclopterus lumpus*, taken by Mr. E. L. Wilson in Chesapeake Bay (57272); young albino diamond-back terrapin, *Malaclemmys centrata*, from Beaufort, N. C. (57291); 4 boat models—mackerel seining steamer, *Alice M. Jacobs;* Grand Banks schooner, *John J. Flaherty;* New England mackerel

COMMERCE, DEPARTMENT OF—Contd.
schooner, *Senator Gardner;* and Columbia River fishing boat (57316); 30 crustaceans (57367); 767 clypeastroid sea-urchins, from the *Albatross* cruises of 1887, 1902, and 1906, reported on by Dr. Hubert Lyman Clark in the Memoirs of the Museum of Comparative Zoölogy (57373); type of lizard, *Callisaurus ventralis myurus,* collected by Prof. J. O. Snyder and Mr. C. H. Richardson in Nevada (57465); type specimen of razor-back sucker, *Xyrauchen uncompahgre* (57487); 2 turtles, *Thalassochelys kempii,* from Beaufort, N. C. (57543); Asteroidea from the *Albatross* cruises in 1891 and 1899–1900, under direction of A. Agassiz, and reported on by Dr. H. Ludwig in Memoirs of the Museum of Comparative Zoölogy (57551); 17 bottles of small fishes collected by Mr. W. V. King, Tulane University, New Orleans, from various places in Louisiana (57572); 32 bottles and vials of plankton, collected by the schooner *Grampus;* invertebrates, rocks and fishes, collected by Mr. G. Dallas Hanna at St. George Island, Alaska, in 1914; a collection of fossils made by Mr. A. G. Whitney at St. Paul Island, Alaska, in 1913 (57592); mollusks, crustaceans, worms (including helminths), fungi, mosses, lichens, liverworts and flowering plants, from St. Paul Island, collected by Mr. Whitney in 1912–1914 (57607); 500 specimens of algae from Beaufort, N. C. (57630); collection of crinoids from the Philippine expedition of the *Albatross,* 1907–1910, reported on by Mr. Austin Hobart Clark (57656); crustaceans from Beaufort, N. C., collected by Dr. W. P. Hay (57805); 9 winkle spawns from Woods Hole, Mass., collected by Mr. V. N. Edwards (57870); 172 skulls of fur seals from the Pribilof Islands (57947); crustaceans from San Francisco Bay, Cal. (57998); 2 boxes and a tank of miscellaneous invertebrates, 165 plants, etc., collected by the *Albatross* while engaged in a survey of San Francisco Bay and of the halibut banks off Washington and Oregon during 1914 (58092); skins of 2 sea-lions from the Pribilof Islands (58264); the first series of pteropods and some cephalopods, collected by the steamer *Grampus* in 1914 (58267); mollusks consisting of specimens of *Succinea* and *Pisidium,* collected on St. Paul Island, Alaska, by Mr. G. Dallas Hanna (58281; 58499); about 150 specimens of parasitic copepods, received through Dr. Charles B. Wilson (58413); 67 type specimens of Philippine fishes (58447); 275 specimens of medusæ, a part of the first series of this group collected by the Coast Survey steamer *Bache* in 1913–1914 and identified by Dr. H. B. Bigelow (58510).

Coast and Geodetic Survey: Ashes probably from Pavlof Volcano, Alaska (57432); collection of historical surveying apparatus (57456); 6 gold pocket chronometers and 1 gold watch (57657).

COMPARATIVE ZOÖLOGY, MUSEUM OF. (See under Harvard University.)

CONSOLIDATED INDIANA COAL COMPANY, Chicago, Ill.: 2 specimens of coal (57912).

CONSOLIDATION COAL COMPANY, THE, Baltimore, Md.: A 12-inch lump of coal from Somerset, Pa., and a 200-pound specimen from Elkhorn, Ky. (57904).

CONTEE, Miss LUCY, Washington, D. C.: Snake, *Natrix sipedon,* from the District of Columbia (58444).

CONTINENTAL GIN COMPANY, Birmingham, Ala.: One hand saw gin, feeder and condenser (58014).

CONTREXEVILLE MANUFACTURING COMPANY, Manville, R. I.: 11 samples of cotton plushes, plain and printed (57317).

COOK, Mrs. O. F., Lanham, Md.: About 8,000 specimens of plants from the Canary Islands (57290).

COOKE, Dr. C. WYTHE, U. S. Geological Survey, Washington, D. C.: 2 specimens of gypsum, crystallized, from Choctaw County, Ala. (57824).

COOLIDGE, Miss HELEN E., Washington, D. C. (through Mrs. Julian James): Collection of old fashion-plates (58407); Madeira lace shawl (58526).

COOPER, Dr. ARTHUR BIRKHEAD, Washington, D. C.: Part of a Chiton from Ecuador (57345).

COOPER, R. M., Waco, Tex. (through Dr. O. P. Hay): Portion of the lower jaw of a young elephant, with one tooth, from Waco (57766).

COPENHAGEN, DENMARK, KÖNIGL. VETERINÆR OG LANDBO-HØISKOLE (through Mr. H. O. Schmit-Jensen): A phasmid in which mutilated antennæ are reproduced as a leg (57547).

COPENHAGEN, DENMARK, UNIVERSITETETS BOTANISKE MUSEUM: Fragment of the type collection of a fern, *Anogramme biardii* (57507: exchange).

COPENHAGEN, DENMARK, UNIVERSITETETS ZOOLOGISKE MUSEUM: Lantern fish, *Rhinoscopelus andreæ* (57792: exchange).

COPP, HENRY NORRIS (through Mrs. Mary H. Copp, Washington, D. C.): An English verge watch, a flip-iron and a Civil War cavalry sword (57383).

CORBETT, G. H., and E. HARGREAVES, Bureau of Entomology, Washington, D. C.: Holotype of insect, *Vulturops floridensis* (58345).

CORSE, Mrs. JOHN M., Boston, Mass.: Dress worn by Mrs. Franklin Pierce at the inauguration of March 4, 1853 (57849: loan).

COSENS, Dr. A., Toronto, Ontario, Canada: 7 adult sawflies and 2 sawfly galls (57154).

COVILLE, FREDERICK V., Bureau of Plant Industry, Washington, D. C.: 15 specimens of blueberries, *Vaccinium*, from Maryland and Virginia (58007).

COVILLE, FREDERICK V.—Continued.

COX, WILLIAM V., Washington, D. C.: Baltimore oriole, *Icterus galbula* (58398).

CRAWFORD, EARL STETSON. (See under National Association of Portrait Painters.)

CRAWFORD, J. C., U. S. National Museum: About 100 Diptera and 900 Hymenoptera, from the vicinity of Washington, D. C. (most of the Hymenoptera are Apoidea with flower records) (57476); 16 specimens of plants from Maryland (57506); small gold ornament, human figure, dug from a grave at Escazu, Costa Rica (58489: loan).

CUNNINGHAM, A. C., U. S. Naval Engineer, U. S. Naval Training Station, Great Lakes, Ill.: Cadet midshipman's full-dress jacket worn by the donor in 1879 when graduated from the U. S. Naval Academy, Annapolis, Md.; also 2 uniform caps of the same period, and a midshipman's special full-dress coat worn subsequent to his graduation (57701).

CURL, Dr. HOLTON C., U. S. Navy, U. S. Naval Hospital, Mare Island, Cal.: 10 skulls and sterna of Philippine birds (57553).

CURRIE, R. P., Bureau of Entomology, Washington, D. C.: 3 salamanders from Browning Lake, Md. (57264).

CUSHING, Prof. H. P., Adelbert College, Cleveland, Ohio: 6 specimens (topotypes) of the brachiopod *Syringothyris textus chemungensis* (57795).

CUSTER, CLARENCE C., Balboa, Canal Zone: Skin of flycatcher, *Elænia chiriquensis*, from Panama (58090).

CUTLER, WILLIAM E., Calgary, Alberta, Canada: Tooth and patella of a fossil horse from Alberta (58004).

CUTTER, V. M., Puerto Barrios, Guatemala (through Mr. Julius Hurter, sr., St. Louis, Mo.): 2 turtles from Guatemala (57552).

DALE, Dr. T. NELSON. (See under Ross and Republic Marble Company.)

DALE, WILLIAM M., Vice-president, Dutton Phosphate Company, Gainesville, Fla. (through Dr. O. P. Hay): Part of the upper jaw, with 3 teeth, of fossil horse, *Hipparion plicatile* (58243).

DALL, Dr. WILLIAM H., U. S. National Museum: Skull of *Marmota* (57625); a fossil fish probably from Connecticut (58428).

DA ROCHA, FRANCISCO DIAS, Museu Rocha, Ceará, Brazil: 7 species of marine mollusks, 13 specimens of fresh-water mollusks and 4 valves of pearly fresh-water shells, from Brazil (57333; 57617; 57992).

DAVID, C. K., Baton Rouge, La. (through Hon. Lewis L. Morgan): Receipt dated 1867, issued to Mrs. S. David for transfer of interest in Federal cotton taxes (57731).

DAVIDSON, Dr. A., Los Angeles, Cal.: 4 specimens of phanerogams, Chenopodiaceae, from California (57654).

DAVIE, Mrs. HARRY, San Diego, Cal.: 3 specimens of mollusk, *Mopalia*, from kelp roots in San Diego County (58031; 58298).

DAVIESS COUNTY COAL COMPANY, THE, Washington, Ind.: Lump of coal (58086).

DAVIS, CHARLES A., Bureau of Mines, Washington, D. C.: Specimen of organic conglomerate from Pemaquid Beach, Me. (57797).

DAVIS, E. S., Linden, Md.: Skin of a black gray squirrel (57295).

DAVISON, D. B., Hachita, N. Mex.: 2 specimens of bismutite (58215).

DAY, Mrs. ARTHUR L., Washington, D. C.: An emergency passport issued by the Consulate General of the United States at Frankfort-on-the-Main, September 1, 1914, to Mrs. Day and her four children, for use in returning to the United States (57477).

DAY, Mrs. ARTHUR L.—Continued.

DEAM, CHARLES C., Bluffton, Ind.: 53 specimens of plants from Indiana (58188).

DEANE, WALTER, Cambridge, Mass.: 104 specimens of plants from the northeastern part of the United States (58294). (See under J. N. Rose.)

DECKERT, RICHARD, New York City: 3 African frogs (57286).

DECORUS MANUFACTURING COMPANY, THE, New York City: Airograph machine for decorating fabrics—the first imported for use in the United States (57668). (See under T. H. McCool and Company.)

DELAVAN, Dr. D. BRYSON, New York City: A photograph of the members of the American Laryngological Association during the first ten years of the existence of that society, with printed list of the members (57228).

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY, THE, Scranton, Pa.: A 10-inch sample of coal (57874).

DENIS, FELIX E., Washington, D. C.: An old, oriental matchlock gun (58349).

DENNIS, L. B., Norwalk, Ohio: United States cavalry spur presented to the donor by Brig. Gen. John Sedgwick and used by him while on duty with Gen. Sedgwick in the military telegraph service in Virginia, West Virginia and Kentucky during the Civil War (58130).

DENSMORE, Miss FRANCES, Bureau of American Ethnology: Collection of ethnologica of the Ute Indians of the Uintah and Ouray Reservation, northeastern Utah, consisting of musical instruments and household and miscellaneous articles, collected by Miss Densmore during the summer of 1914 (58370: purchase).

DENYS, Rev. F. WARD, Washington, D. C.: An oil painting by Frank Duveneck, entitled "Water Carriers—Venice," 1884 (57941); 3 paintings in oil, namely, "Mrs. Hawkins and Family," by Sir William Beechey; "Lady and Two Children," by G. F. Watts, and "Rome and the Campagna," by Richard Wilson (58256). Loan.

DERMOND, Mrs. L. S., Eckley, Colo.: Beetle, *Phanæus carnifex* (57513).

DEXTER YARN COMPANY, Pawtucket, R. I.: Specimens of cotton threads for mending, embroidering, knitting and crocheting (58010).

DICKEY, W. A., Seattle, Wash., (and others) (through Col. W. P. Richardson, U. S. Army): An oil painting by Sydney M. Laurence, "The Top of the Continent, Mt. McKinley, Alaska" (58012: loan).

DILLON, FRANK, McPherson, Kans. (through Dr. O. P. Hay): Tooth of a mastodon (58005).

DINESEN, G., Copenhagen, Denmark: 6 bird skins from Iceland and Greenland (57869: purchase).

DISBROW, Dr. W. S., Newark, N. J.: 10 specimens of minerals (57570); a specimen of phosphuranylite on cyrtolite, from Mitchell County, N. C. (57719); 32 specimens of rhodonite from Franklin Furnace, N. J. (58331: exchange).

DISMER, W. F. (See under O. J. Bennett.)

DODDS, Prof. G. S., University of Missouri, Columbia, Mo.: Crustaceans, consisting of types and specimens of *Streptocephalus coloradensis* and *Diaptomus arapahoensis*, from Colorado (57937).

DODGE, Mrs. ELIZABETH A., Washington, D. C.: 2 revolver models (57382).

DOUD, HUGH, Gilroy, Cal.: Hoary bat, *Nycteris cinerea* (58249).

DOW, MAURICE B., Jonesport, Me.: Spider crab, *Lithodes maia*, from off the coast of Jonesport (57619).

DOWLING, Dr. THOMAS, Washington, D. C.: Iron car-coupling link and pin, found near Bowie, Md. (58527: loan).

DÜMMER, R. A., Kipayo, Kampala, Uganda: 200 specimens of plants from Uganda (58139: purchase).

DUNN, EMMETT REID, Haverford, Pa.: Bat, *Nycteris borcalis*, meadow mouse, *Microtus pennsylvanicus*, and a marmot, *Marmota monax*, all from Midway Mills, Va. (57433).

DUNNINGTON, R. L., Tennallytown, D. C.: Salamander, *Ambystoma maculatum*, from the District of Columbia (58028).

DUPLAN SILK COMPANY, New York City: 7 samples of figured novelty silks (58368).

DUREN, GEORGE B., & SONS, New York City: 12 samples of cotton fabrics, consisting of dress goods, draperies and napkins (58452).

DYER, Mrs. LILLY R., Washington, D. C.: 29 ethnological specimens, consisting of basketry, pottery, a bow and arrows, etc., of the North American Indians (58070: loan).

EASTMAN KODAK COMPANY, Rochester, N. Y.: An autographic kodak, No. 3A (57325).

EASTMOND, JOSEPH, Salt Lake City, Utah: A sample of allophane from Utah (57536).

EGGLESTON, W. W., Bureau of Plant Industry, Washington, D. C.: 28 specimens of hawthorns, *Cratægus* (57628).

EISEMAN, SAMUEL, AND COMPANY, New York City: Samples of silk and silk and cotton dress goods and shirtings (58159).

ELKINS, Mrs. STEPHEN B., Washington, D. C.: A calling costume worn by Mrs. Elkins (57642: loan).

ELLIS, Miss CHARLOTTE C., State College, N. Mex.: 350 specimens of plants from New Mexico (57957: purchase).

EMBEE COMPANY, Washington, D. C.: 2 specimens of pitchblende (57879: purchase).

EMERSON, Prof. B. K., Amherst College, Amherst, Mass.: Specimens of early Silurian limestone with ostracods, from Arctic America, and fossil corals from Asia Minor (57184: exchange).

ENGELHARDT, GEORGE P., The Central Museum, Brooklyn, N. Y.: 10 isopods from New Providence, Bahamas (57841).

EPPES, Miss J. D., City Point, Va.: Specimen of heath, *Erica cinerea*, from England (57867).

ESKRIDGE, JAMES P., Silliman Institute, Dumaguete, P. I.: Several hundred Philippine butterflies and moths (57238).

EUSTIS, GEORGE, Washington, D. C.: 2 rolls of wafer bread from the pueblo of Walpi, northeast Arizona (58326).

EUSTIS, Mr. and Mrs. GEORGE, Washington, D. C.: Pair of Chinese lady's shoes (58327).

EVANS, A. T., University of Colorado, Boulder, Colo.: Reptiles and batrachians, from Michigan (57606).

EVANS MARBLE COMPANY, Knoxville, Tenn.: 2 slabs of Tennessee marble (57571).

EVANS, WILLIAM T., New York City: 4 paintings in oil, namely, "Moonrise at Ogunquit," by H. Hobart Nichols (57370), Portrait of Mrs. Evans and Son, by Henry Oliver Walker, Portrait of William T. Evans, by Wyatt Eaton, and Portrait of Wyatt Eaton, by J. Alden Weir; and a bronze portrait bust of William T. Evans, by J. Scott Hartley (58175).

EXPOSITION, INTERNATIONAL MARINE, AT BORDEAUX, 1907. (See under Bordeaux.)

FAIRBANKS, Hon. CHARLES WARREN, Indianapolis, Ind.: Dress worn by Mrs. Fairbanks, wife of the Vice President, at the inaugural ball, March 4, 1905 (57213).

FAIRVIEW FLUORSPAR AND LEAD COMPANY, Golconda, Ill.: 3 specimens of fluorite (57534).

FAUNTLEROY, Miss JULIET, Lynch Station, Va.: 54 specimens of plants from Virginia (57424; 57573).

FELLOWS, Dr. DANA W., Portland, Me.: 395 specimens of plants from Maine and Vermont (57862).

FELT AND TARRANT MANUFACTURING COMPANY, Chicago, Ill.: Comptometer (57775).

FERRISS, JAMES H., Joliet, Ill.: 2 snakes (58144).

FEWKES, Dr. J. W. (See under Chamber of Commerce, Deming, N. Mex.)

FIELD, MARSHALL, AND COMPANY, Chicago, Ill.: 16 specimens of printed cotton draperies; 7 photographs illustrating the process of engraving copper rollers for printing fabrics; 16 half-tone pictures showing the principal steps in the printing of drapery fabrics; portfolio of samples and suggestions for interior decoration (58323).

FIELD MUSEUM OF NATURAL HISTORY, Chicago, Ill.: 20 photographs of Melanesian Negroes (57548); photograph of a specimen of phanerogam, *Solanum*, from California (57580: exchange).

FIRTH CARPET COMPANY, THE, Firthcliffe, N. Y.: One small rug each of seamless Scotch chenille, Axminster and tapestry-Brussels, and a specimen of tapestry-Brussels carpet, a portion of which is unraveled showing the warp threads printed with the design (57722).

FISHER, Dr. A. K., Bureau of Biological Survey, Washington, D. C.: 6 specimens of plants from the vicinity of Washington (58119).

FISHER, GEORGE L., Houston, Tex.: 106 specimens of plants chiefly from Texas (57629; 57672).

FITZWATER, C., Nokesville, Va.: A sandstone concretion (58067).

FLINT, Dr. JAMES M., U. S. Navy (retired), Washington, D. C.: A set of microscopic apparatus, including two microscopes with certain appliances and two sets of microscopic slides arranged in the form of an endless band (57390).

Florida State Geological Survey, Tallahassee, Fla.: 29 specimens of plants collected in Florida by Mr. R. M. Harper (57451; 57754). Exchange.

Folsom, Dr. J. W., University of Illinois, Urbana, Ill.: Cotypes of 9 species and determined material of 12 other species of springtails, *Collembola* (57887).

Foote Mineral Company, Philadelphia, Pa.: A 201-gram specimen of the Ensisheim meteoric stone, and a 17-gram specimen of the Hainholz stone (58445: purchase); photographs of meteorites (58446).

Förster, Prof. F., Oberkirch, Baden, Germany: Specimen of rat, *Hyomys meeki*, from New Guinea (57950: purchase).

Forwood, Brig. Gen. William H., U. S. Army (through Mr. John H. Zabel, executor, Washington, D. C.): A collection comprising about 500 specimens of minerals and cut stones (58426: bequest).

Foster, A. S., Seattle, Wash.: 192 specimens of cryptogams from Washington, British Columbia and Alaska (57988).

Foster, Edward E., Detroit, Mich.: A Lincoln campaign badge (57538).

Foster, J. H., Brookneal, Va.: A quartz crystal from the vicinity of Brookneal (58143).

Foster, Mrs. John W., Washington, D. C.: A dress worn by Mrs. Foster while her husband, the Hon. John W. Foster, was ambassador on a special mission to Russia in 1897 (57591: loan).

Fox Homer S., South Pasadena, Cal.: 2 rosettes of duck feathers found inside of an old pillow (57638).

Frankland, Dr. W. Ashby, Washington, D. C.: Nest of the purse-web spider, together with the adult spider belonging to it, collected in the vicinity of Washington by Mr. John Allen (58272).

French, P. W., and Company, New York City: 6 tapestries of the 17th and 18th centuries (58176: loan for special exhibition).

Frierson, L. S., Frierson, La.: 4 specimens of mollusk, *Lampsilis pleasii* (57337); 3 specimens (cotypes) of mollusk, *Fusconaia sclecta*, from the Cache River, Craighead County, Ark. (57713).

Gaillard, Mrs. David DuBose, New York City: Hupa (?) Indian basket, from Eel River, Cal.; basket from island of Attu, Aleutian Group, Alaska; a Roman Catholic ritual and its book-rest, from Colombia, South America; and 11 woven bags made by the San Blas Indians, Republic of Panama (57851); pink baby dress (1860), worn by Col. David DuBose Gaillard; dress and stockings worn by Mrs. Edward Gendron Palmer of South Carolina, grand aunt of Mrs. Gaillard, at a ball given in honor of the Marquis de Lafayette at Columbia in 1824, upon the occasion of his return to America; beaded purse made and owned by Dorcas Richardson, wife of Col. Richard Richardson of the Revolutionary Army, and great-great-grandmother of Col. Gaillard; a Cuban pocket-knife; a cribbage-board made of a walrus tusk, Eskimo; and a gold-headed cane inscribed "From log found during excavations for lower lock, Gatun, C. Z., Dec. 1910, 64 ft. below surface of ground. D. D. Gaillard Mem. Isth. Canal Com." (58202). Loan.

Gallaher, Miss L. Bernie, U. S. National Museum: 6 flash-light photographs of the interior of the Franciscan Monastery at Brookland, D. C., taken by the donor (57227).

Gannett, Mrs. Henry, Washington, D. C.: 25 ethnological specimens of America and the Philippine Islands (57442: purchase); 2 Filipino hats (57652).

Gardiner, Prof. J. Stanley, Zoological Laboratory, University of Cambridge, Cambridge, England: 29

GARDINER, Prof. J. STANLEY—Contd. specimens, comprising 21 species, of corals (58380: exchange).

GARLAND, T. M., Ruby, Alaska: Hoof bone of an extinct species of horse (57462).

GARRETT, JUDGE, Toms Creek, Va.: Specimen of fossil plant, *Sigillaria*, from Toms Creek (57796).

GASKELL, Mrs. E. B., Hickory, N. C.: African parrot, *Poicephalus meyeri* (58035).

GAUB, JOHN, Washington, D. C.: A bottle of water and sediment containing 3 specimens of amphipods (58505).

GEE, Prof. N. GIST, Soochow University, Soochow, China: A collection of insects (57653); beetles (yang dzong), used by the Chinese as a cure for internal wounds (58477).

GEIMAN, Mrs. J. A., Washington, D. C.: Beetle, *Dynastes tityus*, from Berryville, Va. (57409).

GEISSE, WILLIAM, Illapel, Chile: 9 specimens of plants from Chile (57670).

GELMAN, CARL, Portland, Oreg.: Specimen of ground beetle, *Nomius pygmæus* (57478).

GEORGETOWN GAS LIGHT COMPANY, Georgetown, D. C.: 25 specimens of gas house coke (57834).

GEORGIA MARBLE COMPANY, THE, Tate, Ga.: 4 slabs of marble (57662).

GIDLEY, J. W., U. S. National Museum: Skull of a deer from South Dakota (57528); a fossil egg from the Miocene of South Dakota (58212).

GILBERT, J. Z., Los Angeles, Cal.: The type of a new fossil crab from California (57979).

GILBERT, Mrs. NEWTON W., Manila, P. I. (through Miss Frances Morris, New York City): 46 ancient and recent pieces of Philippine embroideries on piña cloth (57427: loan).

GILL, DE LANCEY, Bureau of American Ethnology: 33 arrow points from St. Clements Bay, St. Marys County, Md., collected by the donor (57964).

GILLETT, Mrs. ALFRED S., Washington, D. C.: 2 pictures done in embroidery and water color during the early part of the 19th century (57852).

GODING, FREDERIC W., American consul general, Guayaquil, Ecuador (through Department of State): Plaster cast of a stone bearing possible hieroglyphics from Ecuador, made by the present owner of the stone, Mr. O. von Buchwald (58131); 30 insects and 2 scorpions, from Ecuador (58365).

GOLDSBOROUGH, Mrs. MARY F. C., Washington, D. C.: An oil painting "The Old Mill," attributed to Hobbema (58525: loan).

GOODALL WORSTED COMPANY, Sanford, Me.: 30 specimens of wash suiting, Palm Beach cloth (58384).

GRADY, S. A., Grand Junction, Colo.: 3 specimens of mica, with a total weight of 36 pounds (58204).

GRANT, Maj. Gen. FREDERICK D. (through Mrs. Frederick D. Grant): A silver locket inscribed "J. D. G.," containing a lock of the hair of Julia D. Grant, and a gold one containing two locks of the hair of Gen. Ulysses S. Grant (57779).

GRANT, Mrs. FREDERICK D., Washington, D. C.: A gold locket containing a lock of hair of Maj. Gen. Frederick D. Grant (57780).

GRAVES, Miss LUCY M., Alexandria, Va.: A proclamation of President Andrew Jackson, dated December 10, 1832, and printed on silk (58423).

GRAY, Mr. and Mrs. ARTHUR W., Washington, D. C.: Sandalwood casket inlaid with silver, ivory and ebony, from British India; miniature portrait mounted in gold as a pendant, with hair and monogram in the back (58286: loan).

GRAY, FRED W., Alderson, W. Va.: A fragment of glazed Indian pottery from North Carolina (57865).

GREEN, JAMES A., Cincinnati, Ohio: An iron tomahawk of colonial times, found on an island in Stony Lake, Kawartha group, Ontario (57681).

GREENE, Dr. EDWARD L., Notre Dame University, Notre Dame, Ind.: 21 specimens of plants from Arizona (57401).

GREENE, F. C., Bureau of Geology and Mines, Rolla, Mo.: Specimen of fern from the vicinity of Washington, D. C. (57380).

GREENE, GEORGE T., Philadelphia, Pa.: Wasp, *Sphecina hogardii* (57637).

GREENE, W. MAXWELL, American consul, Hamilton, Bermuda (through Dr. T. Wayland Vaughan): 3 specimens of stone from Bermuda (57641).

GREGG, E. B., Washington, D. C.: A double-barrel pistol, with barrels side by side and locks of the Lefaucheux type (58332: loan).

GREGG, W. R., Mount Weather Observatory, Bluemont, Va.: Moth, *Citheronia regalis* (57253).

GRIFFINI, Dr. ACHILLE, Milan, Italy: A pair of specimens of beetle, *Eutrachelus temminckii* (57918).

GRIFFITH, Mrs. MONTE, Cherrydale, Va. (through Mrs. R. G. Hoes): Collection of silver, embroideries, etc. (57215: loan); Hopi Indian bowl (57216); a colonial waffle-iron used by the Milnor family of New York (57417).

GRONBERGER, S. M., Smithsonian Institution: Turtle, *Malaclemys*, from North Carolina (58485).

GROUT, Dr. A. J., New Dorp, N. Y.: 25 specimens of mosses (Nos. 426–450, North American Musci Pleurocarpi) (57848: purchase).

GUIDA, MICHELE, Washington, D. C.: Penholder decorated by donor with hand-woven covering of brightly colored silks (58069).

HACKETT, WESLEY C., Relay, Md.: Beaded bag of the early 19th century (58405: loan).

HAIMBACH, FRANK, Academy of Natural Sciences, Philadelphia, Pa.: 5 cotypes of Lepidoptera (57284).

HALBACH, EDWARD H., Washington, D. C.: Snake, *Virginia valeriæ*, from Washington (58161).

HALEDON THROWING COMPANY, New York City: 13 skeins of novelty yarns and a small sample of silk crêpe dress goods (57568).

HALIFAX, NOVA SCOTIA, PROVINCIAL MUSEUM: 11 crustaceans, *Meganyctiphanes norvegica*, from Hubbards Cove, Halifax County, Nova Scotia (58115).

HALL, FRANK H., Sausalito, Cal.: A brick with stamped mark at one end, found in an Indian shell mound at Sausalito (57357).

HALL, Dr. R. O., San Jose, Cal.: A miscellaneous collection of minerals and ores, including a large specimen of stibnite and one of native copper (57200).

HAMILTON, Mrs. FANNIE, Petersburg, Va.: Cotton bedspread woven by Miss Julia A. Poole in Dinwiddie County, Va., in 1844, from cotton grown, picked, carded and spun by her; 2 patchwork quilts for a doll's bed, made in 1835 by Mrs. William Winfield for her granddaughter, Julia A. Poole, mother of the donor (57609).

HAMLIN, Mrs. TEUNIS S., Washington, D. C.: A grindstone, used from 1800 to 1900 by the ancestors of Rev. Teunis S. Hamlin, D. D. (58495).

HANBURY, Lady KATHARINE A., La Mortola, Ventimiglia, Italy: 7 living specimens of Cactaceae (57576: exchange).

HANCOCK, JACK, West Palm Beach, Fla.: 2 skulls of Florida otter, *Lutra canadensis vaga* (58241).

HARDWICK AND MAGEE COMPANY, Philadelphia, Pa.: A series of 30 specimens illustrating the manufacture of Wilton rugs (57359).

HARDY, HARVEY, Goodsprings, Nev. (through Mr. Victor C. Heikes): Specimens of green crystal pseudomorphs (58230).

HARGREAVES, E. (See under G. H. Corbett.)

HARRING, H. K., Bureau of Standards, Washington, D. C.: 50 microscopic slides of Rotatoria from Washington

HARRING, H. K.—Continued.
and vicinity (57540); microscopic slide showing the tornaria larval stage of *Balanoglossus* (57930).

HARRIS, Capt. J. R., Medical Corps, U. S. Army, Fort Slocum, N. Y.: A string of brass pony bells from the Moros of Cotta-bato Valley, Mindanao, P. I. (57682).

HARRISON, Miss CARRIE, Bureau of Plant Industry, Washington, D. C.: 6 pottery heads from San Juan Teotihuacan, Mexico (57486); a modern pottery jar from Mexico (57819).

HARVARD UNIVERSITY, Cambridge, Mass.:
Cryptogamic Herbarium: 8 specimens of pteridophytes, chiefly from New Hampshire (57798: exchange).
Gray Herbarium: 12 specimens of willows, *Salix*, chiefly duplicate types, from Newfoundland (57736: exchange).
Museum of Comparative Zoölogy: Turtles from South America and Georgia (57650: exchange); 2 specimens of mollusk, *Polygyra johannis*, from La Carolina Lake, Mendosa, Cuba, received through Dr. Thomas Barbour (58440).

HARVEY, M. W., Sykesville, Pa.: A fossil tree stump from the Stanley mine, Sykesville (58228: purchase).

HASWELL, Prof. W. A., University of Sydney, Sydney, New South Wales, Australia: 6 crabs collected in the Antarctic by the Mawson Expedition, consisting of 4 specimens of *Halicarcinus planatus*, a specimen of *Nectocarcinus antarcticus*, and a paratype of *Marestia mawsoni* (58511).

HATFIELD, A., jr., New York City: 50 postage stamps of native Indian States (58411); 76 stamps of native Indian States (58412: exchange).

HAWAII, COLLEGE OF, Honolulu, Hawaii: About 200 small reef crabs from Molokai, Hawaii (58008).

HAY, Dr. O. P., Washington, D. C.: Skull of a fossil sirenian from Oregon (57428: purchase). (See under

HAY, Dr. O. P.—Continued.
George L. Cannon, R. M. Cooper, William M. Dale, Frank Dillon, and J. D. Robertson.)

HAY, Prof. W. P., Business High School, Washington, D. C.: Flies and mites (57379).

HAYDEN, Capt. E. E., U. S. Navy, U. S. Naval Station, Key West, Fla. (through Navy Department): 3 specimens of electric wire and a specimen of porcelain insulator, showing the result of lightning stroke at radio station, Key West (57853).

HEIDEMANN, OTTO, Bureau of Entomology, Washington, D. C.: 75 Diptera collected around lights at Forest Glen, Md. (57693).

HEIGHWAY, A. E., New York City: 5 specimens of minerals from Cuba and California and a sample of pita fiber from Panama (57170).

HEIKES, VICTOR C. (See under Bull Valley Gold Mines Company, Harvey Hardy, and Frank Wilson.)

HELLER, A. A., Chico, Cal.: 490 specimens of plants from California (57322; 57773: purchase); 33 specimens of plants, mainly grasses and ferns, from California (57322; 57532; 57771).

HENDERSON, JOHN B., Washington, D. C.: The only known specimen of the mollusk, *Haliotis pourtalesi*, from the Pourtales Plateau, Fla. (57266); marine worm, a starfish and 3 fishes (57296); a large collection of operculate land shells from the Philippine Islands, mostly from the Quadras collection (57332); crustaceans from off Miami, Fla. (57492); approximately 35,000 selected specimens of mollusks, generally identified and labeled, from all parts of the world, except the West Indian region (57806); about 550 land shells from Alabama (57827); about 100 fragments of fossil mammals from the Cumberland cave deposit, collected by Mr. J. W. Gidley (58354); about 45 crustaceans and a small octopus, from dredgings by the *Eolis* in the

HENDERSON, JOHN B.—Continued.
Gulf Stream off Key West, Fla. (58506).

HENDERSON, JOHN B., and PAUL BARTSCH: Birds, reptiles, batrachians, fishes, marine invertebrates, mollusks, insects, algæ and Jurassic fossils, collected in Cuba by the *Tomas Barreras* expedition, 1914 (57608).

HENDERSON, Judge JUNIUS, University Museum, Boulder, Colo.: Shells from the Philippine Islands (58395).

HENDLEY, HENRY W., U. S. Department of Agriculture, Washington, D. C.: A stone ax from St. George, Grenada, British West Indies, collected by the donor (58053).

HERNDON, J. H., Tyler, Tex.: Specimen of gadolinite from Baringer Hill, Tex. (57633: purchase).

HESS, FRANK L., U. S. Geological Survey, Washington, D. C.: A 145-gram slice of the Roebourne, Australia, meteoric iron (58169). (See under American Vanadium Company, Harold Boericke, S. H. Brockunier, F. P. Kendall, C. C. Lynn, and Wolf Tongue Mining Company.)

HESS, Prof. W. E., University of Porto Rico, Mayaguez, P. R.: 39 specimens of ferns from Porto Rico (57310; 57616).

HETH, Miss NANNIE RANDOLPH, Washington, D. C.: Cut glass bowl (57549: loan).

HEWETT, Dr. E. L. (See under Panama-California Exposition.)

HEYE, GEORGE G., The Heye Museum, New York City: Collection of skeletal material from an Indian burying-ground on the Jersey side of the Delaware River, opposite Minnisink Island, three miles below Montague, N. J. (57598); a human skeleton found in a flexed position about four feet deep, in Skeleton Rockshelter, Slate Spring Hollow, near Turkey Ford, Cowskin River, Okla. (57926); an Indian skeleton from the farm of Mr. W. G. Raines, Wheeler Station, East Bloomfield, Ontario County, N. Y. (58034).

HIBBARD, RAYMOND R., Buffalo, N. Y.: 40 specimens, representing 15 species, of Devonian fossils (57252); conodont material from Eighteen Mile Creek, N. Y. (57323); 76 specimens of minerals (57921); 40 slabs containing conodonts (58029). Exchange.

HIGGINS, H. C., Uxbridge, Mass.: 3 marine shells (57505).

HILL, Prof. H. A., Cumberland University, Lebanon, Tenn.: Earthworms from Tennessee (57464).

HILTON, Dr. WILLIAM A., Pomona College, Claremont, Cal.: 6 annelids from California and 13 specimens of sponge, *Porifera*, from Laguna Beach, Cal. (57816).

HIND AND HARRISON PLUSH COMPANY, THE, Clark Mills, N. Y.: 14 specimens of cotton and silk plushes and textile fur fabrics (57366).

HINKLEY, ANSON A., Dubois, Ill.: 94 specimens, representing 13 species, of land and fresh-water shells from Guatemala (57331); fresh-water shells from the Ozark region of Missouri and Arkansas (57762).

HIRASE, Y., Okazaki, Kyoto, Japan (through Dr. William H. Dall): A hand-painted atlas of mollusks (58306).

HITCHCOCK, ROMYN, Ithaca, N. Y.: Specimens of the McDonough method of photographing and reproducing colors, with descriptive pamphlet and prints (57233); record of Rogers printing telegraph (58039).

HODGE, F. W., Bureau of American Ethnology: A specimen of native copper from the San Andres Mountains, N. Mex. (57934).

HOES, Mrs. R. G., Washington, D. C.: An elegiac poem on the death of Gen. George Washington, printed on white satin and framed (57391: loan); 14 stone celts (hatchet blades) and a stone spearhead (57565); waistcoats and small-clothes worn by President James Monroe and dresses and a scarf worn by Mrs. Monroe, belonging to the

Hoes, Mrs. R. G.—Continued.
Spurrier collection (58057: loan); a hand-painted and ivory fan (58409: loan); bookmark of perforated board, made by Maria Hester Monroe, daughter of President Monroe; 2 valentines sent about 1840 to Miss Marion Campbell by Charles Anthon, American classical scholar; and 13 silk ribbon souvenir badges with black printed portraits (58422: loan); 27 pieces of lace and a Chinese jade bracelet (58503: loan). (See under Miss Mary S. Buchanan, Miss Grace Olmsted Clarke, Mrs. Monte Griffith, and Mrs. Thomas Hamilton Wilson.)

Hofmann, Oscar, Corporation, New York City: Sample of tussah silk suiting (57994).

Holmes, A. L., Dunedin, Fla.: Tail of a lizard, *Ophisaurus*, from Florida (58027).

Holmes, William H., U. S. National Museum: 86 miscellaneous archeological objects collected by the donor from various localities in the United States and Mexico (57952).

Holstein, Otto, San Antonio, Tex.: 163 bird skins from Ecuador (57194).

Holway, E. W. D., Pillsbury Hall, University of Minnesota, Minneapolis, Minn.: 48 specimens of plants from Guatemala (58105).

Home-Riverside Coal Company, The, Leavenworth, Kans.: A cube of coal (58520).

Hood, J. D., Bureau of Biological Survey, Washington, D. C.: 13 beetles collected in Panama by James Zetek (57634).

Hopkins, A. D., Bureau of Entomology, Washington, D. C.: Land and fresh-water shells, representing 3 species, from West Virginia (57307).

Hopkins, L. S., Kent, Ohio: 2 specimens of plants from Ohio (57168).

Hopkins, W. H., La Verkin, Utah: Samples of carnotite and associated minerals, from Utah (58093).

Hough, Dr. Walter, U. S. National Museum: 31 bronze and silver coins (57664).

Hough, Mrs. Walter, Washington, D. C.: A large collection of plant specimens, chiefly from Arizona (57769).

Hout, Harry, Washington, D. C.: Leech from Potomac River near Washington (57566).

Hovis, S. T., Bessemer City, N. C.: Samples of andalusite from Gaston County, N. C. (58003).

Howard, Dr. S. Wren, Washington, D. C.: 40 cut square U. S. stamped envelopes, used and unused, of the issues of 1853–1855 and 1863–1866 (57352); 136 stamps from Holland, Norway, Peru, Nicaragua and San Marino (57559); 120 stamps from Salvador, Norway, San Marino and the Philippines (57698). Exchange.

Howe, R. Heber, jr., Concord, Mass.: 6 specimens of lichens (58089).

Howe, S. H. (See under King Philip Mills.)

Howell, A. B., Covina, Cal.: 9 skins of Socorro petrel, *Oceanodroma socorroensis* (58205: exchange).

Hoxie, Brig. Gen. Richard L., U. S. Army (retired), Washington, D. C.: A full-length statue of the goddess Sappho, by Vinnie Ream (Mrs. R. L. Hoxie) (58419).

Hrdlička, Dr. Aleš, U. S. National Museum: 2 snakes and 2 mammals from Africa (57309); 4 postcards and a photograph of Tibetans (57385); 2 photographs showing Tibetans engaged in illuminating sacred pictures (57747); flying squirrel from the District of Columbia (57893); 2 miniatures, in plaster, of Colombian monoliths, received by the donor from Dr. Karl Theodor Stöpel, Heidelberg, Germany (58022). (See under J. Matiegka.)

Hunt, James, Smithsonian Institution: An English double-action revolver and a single-action revolver (57720).

HURLEY, S. P., Mexia, Tex.: Tooth of a fossil horse of the genus *Equus* (58290).

HURON TEXTILE COMPANY, New York City: Sample of cotton wash goods and 3 samples of silk stripe cotton voile (57336).

HURTER, JULIUS, sr., St. Louis, Mo.: 14 reptiles and a batrachian, from Central America and the United States (57512; 58250); snake and 2 salamanders, from Missouri (58296; 58441).

IGLEHART, Miss M. E., Chicago, Ill.: Portrait, in oil, of John Sherman, statesman, by Wm. Garl Browne, February, 1879 (58101: loan).

IHERING, Dr. H. VON, Museu Paulista, São Paulo, Brazil: 65 crabs from Brazil (57440).

INDIAN MUSEUM, Calcutta, India: Fragments (10.16 grams) of Manbhoom meteorite; a piece (14.66 grams), dust and fragments (2.86 grams) of Lodhran meteorite (57479: exchange).

INDIANA STEEL COMPANY, Chicago, Ill.: 14 detailed photographs of by-product coke-recovery plant of Indiana Steel Company's plant at Gary, Ind. (58516).

INTERIOR, DEPARTMENT OF:

Bureau of Mines: A sample of peat from Minnesota, collected by Mr. E. K. Soper (57503).

U. S. Geological Survey: Microscopic slides illustrative of the rocks of the Penobscot Bay quadrangle, Me. (57151); 6 specimens of granite from the Elkhorn district, Mont., collected by Dr. Whitman Cross (57152); a collection of sedimentary rocks from the Ouray quadrangle, Colo., collected by Dr. Cross and assistants and described in the Ouray folio of the Survey (57171); rocks representing the geology of the Engineer Mountain quadrangle, Colo., collected by Dr. Cross and assistants, and described in Folio 171 (57246); a large specimen of fossiliferous gray limestone from Bare Mountain, Nev., donated to the Survey by Mr. A. A. Turner (57153); rock and ore specimens from the Jarbridge and Contact mining districts, Nev. (57172); rocks and ores from the Dillon quadrangle, Mont., and adjacent areas, collected and described by Mr. A. N. Winchell in Survey Bulletin 574 (57173); a collection illustrative of the economic geology of the feldspar deposits of the United States, described by Mr. Edson S. Bastin in Survey Bulletin 420 (57174); type collections from the following mining districts: White Mesa and Bently, Ariz.; Hayden Hill, Winters (Hess), and High Grade, Cal.; and Miners Basin and Wilson Mesa, Utah (57175); a collection of Devonian invertebrate fossils, including a full series from the Watkins Glen and Catatonk quadrangles, N. Y., and large collections from elsewhere in New York and from other States (57177); a type collection of rocks, minerals, and ores from the San Francisco and adjacent districts, Utah, described by Mr. B. S. Butler in Professional Paper No. 80 (57203); miscellaneous duplicate collection of geological specimens from the San Francisco and adjacent districts, Utah (57249); rock specimens from Montana, Wyoming, Idaho, Washington, New Mexico, and Utah, collected principally by parties in charge of Mr. Charles T. Lupton from 1907 to 1913, inclusive (57250); miscellaneous geological specimens (57251); a series of gem minerals, including rough and cut stones, collected by Mr. D. B. Sterrett (57287); 35 rock specimens from the National District, Nev., with catalogue, labels, and thin sections, illustrating a bulletin by Mr. Waldemar Lindgren (57343); 325 specimens of phosphate collected in Florida by Mr. George H. Eldridge during 1894 (57344); specimen of columbite from Pala, San Diego County, Cal. (57445); specimen of custerite from Custer County,

INTERIOR, DEPARTMENT OF—Continued.

Idaho (type material) (57590); specimen of shattuckite with bisbeeite, from Bisbee, Ariz. (type material) (57611); 5 small lots of vertebrate fossils collected by Mr. W. T. Lee in Nebraska, Wyoming, and Colorado (57643); 73 specimens of plants collected in Alaska by Mr. R. H. Sargent and Mr. P. S. Smith (57702); 3 boxes of geological specimens collected in the Fort Hall Reservation, Idaho (57710); a collection of rocks and ores from the Hardscrabble Mining District, described by Mr. J. Fred. Hunter in Bulletin 580–C; and a specimen of orbicular diorite from Davie County, N. C., described by Mr. Thomas L. Watson in Journal of Geology 12 (1094) (57727); 2 specimens of cebollite and 1 of melilite, from the Iron Hill Area, Uncompahgre quadrangle, Colo., described by Mr. Hunter and Mr. E. S. Larsen in the Journal of the Washington Academy of Sciences, Vol. IV, No. 16 (58313); 2 boxes of rock fragments, consisting mainly of asbestos and talc (57767); slabs with scales and scute impressions of Eocene fishes of the genus *Lepisosteus*, collected by Mr. Dean E. Winchester in eastern Utah and western Colorado (57823); fragmentary Mesozoic and Tertiary vertebrate remains found by Mr. C. J. Hares in Natrona and Carbon Counties, Wyo. (57826); 4 specimens of celestite from Mt. Bonnell region, near Austin, Tex., and 2 specimens of barytes from deposits near Danville, Ky. (57878); about 200 specimens of fossil corals and shells from the Columbus (Onondaga) limestone, near Marblehead, Ohio, collected by Mr. Thomas Piwonka (57883); gems, including rough and cut stones, from California, Nevada, New Mexico, Massachusetts, and Mexico (57884); 5 small lots of fragmentary vertebrate fossils from southeastern Montana, collected by Mr. Clyde Max Bauer (57902); 2 small specimens of benitoite, 1 cut and 1 rough (57919); type crystals of mercury minerals from Terlingua, Tex., described in Survey Bulletin No. 405, and of variscite and lucinite from Lucin, Utah (57935); a set of rock specimens collected by Mr. C. F. Bowen in the Snake River Valley, Idaho, in 1911 (57966); geological collections from the Idaho Springs and Aspen (Colo.), and the Goldfield, Silver Peak and Tonopah (Nev.) districts, made by Mr. J. E. Spurr (57971); 4 small lots of fragmentary vertebrate fossils, collected by Mr. E. T. Hancock in Oliver County, N. Dak. (58002); 4 boxes containing samples of sand and gravel collected by Dr. David T. Day in connection with the investigations of the black sands of the Pacific coast (58020); 16 type mineral specimens (58032); small rock specimens collected by Mr. N. H. Darton to illustrate Deming folio and report on geology and water of Luna County, N. Mex. (58075); phosphate rock from Woodford County, Ky., and Lewis County, Tenn. (58141); a specimen of peculiarly weathered glassy andesite, with section (58194); a specimen of shale with hydrocarbons, from the Green River formation, Uinta County, Utah (58213); 121 lots of fossil mollusks from Virginia and North Carolina, representing the types of 121 species described by Miss Julia A. Gardner (58244); 3 fossil bones from the Pliocene or Miocene, near Burkeville, Tex., collected by Mr. G. C. Matson and Mr. Alexander Deussen (58245); 4 specimens of turquoise, illustrated and described by Dr. Joseph E. Pogue in his monograph on "The Turquoise" (58258); a collection of Upper Cretaceous invertebrates, described by Dr. L. W. Stephenson in a monograph entitled "Upper Cretaceous Mollusca and Vermes from the Carolinas" (58283); 9 small lots of Tertiary vertebrate fossils collected by Mr.

INTERIOR, DEPARTMENT OF—Continued.
R. W. Pack and Mr. Robert Anderson in the Diablo Range, Cal. (58314); 25 types and figured specimens representing 4 species of fossil Brachiopods described by Prof. Henry Shaler Williams (58467).

U. S. Patent Office: Models of 2 House and House sewing machines, a Crompton loom, a Bigelow loom, a Gorrie ice-making machine, and a Sholes, Glidden and Soule typewriter (57610).

INTERNATIONAL ACHESON GRAPHITE COMPANY, Niagara Falls, N. Y.: Collection of graphite products (57990); photographic enlargements of the plant of the International Acheson Graphite Company and of a general view of Niagara Falls (58535).

IBENEO, Bro. G., La Salle College, Ancon, Canal Zone: A small collection of Lepidoptera from Panama (57733).

ISHAM, SAMUEL, ESTATE OF (through Mrs. Julia Isham Taylor, executrix, New York City): An oil painting entitled "Wooded Landscape," by Samuel Isham, N. A. (57809).

JAHN, Dr. ALFREDO, Caracas, Venezuela: 14 specimens of plants from Venezuela (57414); 52 specimens of plants from Venezuela (57931: purchase).

JAMES, Mrs. JULIAN, Washington, D. C.: Collection of relics of the Bailey-Myers-Mason families (57219: loan); reed automatic hand organ (57232); pianola and 6 music rolls (57301); a tiger skin made into a rug, presented to Lieut.-Commander Theodorus Bailey Myers Mason by the King of Korea (57781: loan). (See under Miss Helen E. Coolidge, Mrs. Allan McLane, Miss Phoebe Munroe, Mrs. José R. F. Savage.)

JAMESON, E. M., Washington, D. C.: A young great blue heron, *Ardea herodias* (57188).

JANSEN & PRETZFELD, New York City: 2 samples of novelty silks for trimmings, sample of pongee silk, and a sample of warp-printed taffeta (58287).

JEFFERSON & CLEARFIELD COAL AND IRON COMPANY, Rochester, N. Y.: Lump of coal and a fossil (57905).

JENKS, G. W., Stephenville, Tex.: Vomerine plate of a pycnodont fish (57441).

JEPSON, Prof. W. L., University of California, Berkeley, Cal.: 22 specimens of plants from California (57740).

JESSUP, J. M., Corvallis, Oreg.: Snake, *Crotalus oregonus*, from Washington (57482).

JIMÉNEZ, OTÓN, Museo Nacional, San José, Costa Rica: 30 specimens of plants, mostly ferns, from Costa Rica (57205; 58154; 58390).

JOHNS HOPKINS UNIVERSITY, BOTANICAL GARDEN, Baltimore, Md.: Living specimen of cactus, *Pediocactus simpsonii* (58138: exchange).

JOHNSON, J. CHESTER, Marine Mills, Minn.: A specimen showing amethyst attached to carnelian (57475).

JOHNSON, Mrs. J. W., Pettus, Tex.: Bridled weasel, *Mustela frenata*, from Charco, Tex. (57793).

JOHNSON, RALPH CROSS, Washington, D. C.: 13 oil paintings (58257; 58341). Loan.

JOHNSTON, EARL LYND, Fort Lupton, Colo.: 100 specimens of plants from Colorado (57247).

JOHNSTON, H. F., Washington, D. C.: 40 specimens of plants from Hammerfest, Norway (57531).

JONES, C. H., Brooklyn, N. Y. (through Mr. E. W. Nelson, Bureau of Biological Survey, Washington, D. C.): 7 samples of bark cloth from the Mosquito coast of Nicaragua, made from the inner bark of the "tunu" tree, *Castilla tunu* (58013; 58023).

JONES, FOULK, & SONS, Slate Hill, Pa. (through Dr. F. W. Clarke, Washington, D. C.): Specimen of shale with thin plates of pyrite (57210).

JONES, MARCUS E., Salt Lake City, Utah: 2 living specimens of cactus, *Opuntia*, from Utah (57192).

JONES, NORMAN, Landover, Md.: Adult female specimen of Cooper's hawk, *Accipiter cooperi*, from Maryland (57430).

JOYCE, MAURICE, Washington, D. C.: A bronze electrotype of the great seal of the Confederate States of America (57218).

JUDD, GEORGE H., Washington, D. C.: Harpel's Typograph, or Book of Specimens (58166).

K. K. NATURHISTORISCHES HOFMUSEUM. (See under Vienna, Austria.)

KEENE MICA PRODUCTS COMPANY, Keene, N. H.: 37 specimens of mica and mica products (57491).

KELEHER, T. A., Washington, D. C.: Entomological specimens exhibiting the life cycle of the silkworm moth, including eggs, larvæ and chrysalis in formalin, whole and pierced cocoons, and moths (57305: purchase).

KELLERS, Dr. H. C., U. S. Navy, Mare Island, Cal.: Reptiles and batrachians, crustaceans, insects, bird skins and eggs, and a fossil (57817).

KELSEY, Prof. F. W., San Diego Commercial College, San Diego, Cal.: 21 specimens of mollusk, *Thais emarginata*, from San Diego (58481).

KEMEYS, Mrs. EDWARD, Washington, D. C.: 2 portraits of Edward Kemeys and 1 of Mrs. Kemeys; 3 portraits of Indians and 5 landscapes, by several artists; 10 paintings of animal subjects, mostly by Mr. Kemeys; 2 bronze candelabra and 2 plaster casts of animals, by Mr. Kemeys (58094: loan).

KENDALL, F. P., American Can Company, Portland, Oreg. (through Mr. Frank L. Hess): Specimens of tin ore (57374).

KENNEDY, CLARENCE H., Palo Alto, Cal.: 249 adult dragonflies, 7 nymphs and 43 nymphal exuviæ, from Oregon and Washington (57412).

KENT, W. A., Contact, Nev.: Idaho pigmy rabbit and a hard-mouth chub, *Acrocheilus alutaceus* (57142); minnow, *Richardsonius hydroplox*, from Salmon River at an altitude of 5,300 feet (57297).

KENTUCKY AGRICULTURAL EXPERIMENT STATION, Lexington, Ky.: 16 specimens of goldenrod, *Solidago*, from Kentucky (58157).

KEW, LONDON, ENGLAND, ROYAL BOTANIC GARDENS: Fragments of types of 2 ferns, *Polypodium leptopodon* and *P. pruinatum* (57508; 58050); a drawing and 2 fragments of the types of 2 phanerogams, *Hebanthe* (58097). Exchange.

KEYSER, E. W., Washington, D. C.: A Zuñi gourd rattle, 2 Cheyenne rawhide rattles, a Sioux pipe-stick and flute, a Kiowa quirt and an Osage bow and arrows (57749: exchange).

KILPATRICK, Mrs. LOUISA V. DE, Santiago, Chile: Collection of relics of the late Gen. Judson Kilpatrick, U. S. Army (57292: loan).

KING, Dr. E. F., Washington, D. C.: Larva of fly, *Fannia* (57636).

KING PHILIP MILLS, Fall River, Mass. (through Mr. S. H. Howe, New York City): 4 specimens of bleached muslin (58321).

KIRTLEY, GEORGE G., Van Horn, Tex.: Garnets from Texas (57595).

KISSNER, ROBERT, Ironton, Mich.: Specimens of rutile, corundum, garnet, tourmaline, and other minerals, from Clearwater County, Idaho (58074).

KITSON, HENRY H., New York City: Bronze bust of Viscount Bryce, by the donor (57244).

KLASE, J. S., Avon Park, Fla.: Specimen of beetle, *Stratejus antœus* (57480).

KLEIN, EUGENE, Philadelphia, Pa.: Specimen each of the 3, 5, 10 and 20-pfennig stamps of the German Empire over printed for use in Belgium (58079); 2 St. Louis postmaster provisional stamps, 1845, namely, 10-cent type I, and 10-cent type III (58133: exchange).

KLOTS THROWING COMPANY, Fredericksburg, Va.: A series of specimens illustrating the processes used in throwing silk (57239).

KNAB, FREDERICK, Bureau of Entomology, Washington, D. C.: 184 Diptera and 25 miscellaneous insects, from the vicinity of Washington, collected by the donor (57545).

KNOPF, EZRA C., San Ysidro, Cal.: 3 specimens of catalinite, cut for gem stones (57955: purchase).

KNOWLTON, S. D., Perthshire, Miss.: Portion of a tooth of a mastodon (57339).

KÖNIGL. VETERINÆR OG LANDBO-HØISKOLE. (See under Copenhagen, Denmark.)

KRANTZ, Dr. F., Bonn, Germany: A piece of the Tennasilm, Esthland, meteoric stone, weighing 998 grams (57936: exchange).

KRONHOLTZ, S., Stamford, Conn.: A watch movement and an English watch in a silver case (57631).

KRYGER, J. P., Gjentofte, Denmark: 146 vials of biological material of Coleoptera; 51 tubes of Hymenoptera; a sheet of material of wasp, *Salius sanguinolentus*, showing prey, larvæ and cells; a sheet of vials of spider, *Agrolea proxima*, showing egg case in various stages of construction (57689).

KUESTER, ARTHUR, Stapleton, Staten Island, N. Y.: Living specimen of cactus, *Opuntia* (58292: exchange).

KUNZ, Dr. GEORGE F., President, The American Scenic and Historic Preservation Society, New York City: 2 medals issued by the American Numismatic Society, commemorating the dedication of the Grant Monument and the discovery of America by Christopher Columbus, respectively (58146).

KUNZE, Dr. R. E., Phoenix, Ariz.: Living specimen of cactus, *Echinocereus kunzei* (58263: exchange).

KURSHEEDT MANUFACTURING COMPANY, THE, New York City (through Mr. Richard Bloch, secretary and general manager): The first four working-models of the Groebli Automat, the first embroidery Jacquard used in America for operating the Schiffli embroidering machine; also the first punching machine used for perforating the paper roll which operates the automat—all five machines invented by Mr. J. A. Groebli of New York (58529).

LAKE, R. E., Las Vegas, Nev.: A specimen of vanadium-bearing ore and one of oolitic iron (58142).

LAMB, Dr. D. S., Army Medical Museum, Washington, D. C.: 2 anatomical specimens (57230; 58001).

LANGE, R. C., St. Louis, Mo.: 9 Lepidoptera belonging to the genus *Catocala* (58192: exchange).

LANSBURGH AND BRO., Washington, D. C.: Collection of 92 small named samples of cotton and silk dress goods (58531: purchase).

LARKIN, Mrs. J. D., Buffalo, N. Y.: Lavender silk dress (skirt and bodice) worn at the White House by Abigail Powers, wife of President Millard Fillmore, during her husband's administration, 1850–1853 (57708: loan).

LARRIEU, E. P. A., Turner, Ariz.: Lizard, *Coleonyx variegatus*, and 2 shells, *Anodonta californiensis*, from Arizona (57404).

LATIMER, MORTIMER, Hyattsville, Md.: Cooper's hawk, *Accipiter cooperi*, from Maryland (57829).

LAWRENCE AND COMPANY. (See under Pacific Mills.)

LAWSON, J. B., Sevierville, Tenn.: A specimen of metallic iron of doubtful origin (58091).

LAY, Rev. GEORGE WILLIAM, Raleigh, N. C.: Decorated pottery bowl from a cliff-dwelling near Cortez, Colo. (57612: loan).

LEA, A. V., Leakey, Tex.: Specimen of phanerogam, *Pentstemon australis*, from Texas (58308).

LEAVY, JOSEPH B., U. S. National Museum: 226 specimens of postage, parcel post, telegraph and other stamps and stamped envelopes, used and unused (57285).

LEHIGH COAL AND NAVIGATION COMPANY, THE, Lansford, Pa.: 15 pounds each of broken coal, egg coal, stove coal, chestnut coal, pea coal, buckwheat coal Nos. 1, 2, 3, 4, and of brickettes; also a specimen of anthracite coal from the northern end of Southern Basin (57907).

LEHIGH UNIVERSITY, DEPARTMENT OF GEOLOGY, South Bethlehem, Pa.: Specimen of gneiss from Shiloh, N. J. (57763).

LEITZEL, ERNEST A.: Fossil teeth and fragments of bones, from Florida (58260).

LEUMANN, BOESCH & WEINGART, New York City: 2 specimens of Swiss machine-embroidered trimmings, showing the use of silver tinsel (58338).

LEWIS, Rev. L. V., Henderson, Ky. (through Dr. L. O. Howard, Washington, D. C.): Parasitic copepod on goldfish from Henderson (57632).

LEWTON, F. L., U. S. National Museum: 8 specimens of phanerogams, Malvaceae, from Australia (58151).

LINDSEY, W. T., Marshall Hall, Md.: Specimen of king rail, *Rallus elegans*, from Maryland (57674).

LIPTON, LOUIS, Grand Junction, Tenn. (through War Department): A bronze belt buckle and a bronze clasp of the period of the Civil War (58300).

LOCKER, Mrs. J. J., Washington, D. C.: A Cheyenne Indian quiver from Indian Territory, said to have belonged to Two Moons, collected by Mr. Alfred Clarke Hawley (57229).

LOCKWOOD, Mrs. BELVA A., Washington, D. C.: Mollusks, minerals, corals, crustaceans, a starfish, and anthropological specimens (57263).

LONG, BAYARD, Academy of Natural Sciences, Philadelphia, Pa.: Specimen of phanerogam, *Chenopodium*, from New Jersey (57738).

LONG, The Misses, Washington, D. C.: Memorials of the Bradford family of New England, embracing 26 articles, including a mahogany writing desk, inlaid jewel box, ivories, brasses, bronzes, etc. (57245: loan); a walking stick of tea-wood with onyx head, brought from China in 1839 for Isaac Chauncey Long (57658: loan); 2 carved pearl shells (57993: loan); printed facsimile of "The New York Morning Post," November 7, 1783; and facsimile of "The New England Courant," February 11, 1723, published by Benjamin Franklin—printed in 1856 on a press once used by Franklin (58351).

LOWENSTEIN, Miss LORETTA, Washington, D. C.: Pastel painting on gray paper, "Girl's Head," by the donor (57980).

LOWRY, HOMER H., Pekin, China: Larva of an ichneumon fly (57618).

LYNN, C. C., Greenriver, Utah (through Mr. Frank L. Hess): A specimen of uvanite from Emery County, Utah (58163).

LYON, The Misses ELIZABETH L., MARY and GRACE, Baltimore, Md.: Military trappings, etc., collected in Japan about thirty years ago by the late J. Crawford Lyon, consisting of 20 helmets, 8 helmet crests, 6 face-pieces (masks), a pair of stirrups, 11 spears and staffs, 73 sword guards, 273 sword ornaments, 208 hara-kiri knife handles, 17 small knives, 23 knife blades and a helmet decoration (57686).

MCATEE, W. L., Bureau of Biological Survey, Washington, D. C.: 35 Hymenoptera, *Comedo anomoccrus* (57144); fishes collected in the canal and river in the vicinity of Plummers Island, Potomac River (57527); 11 crabs, representing 3 species, from Oyster Bay, Wash. (57688; 57752); 3 crabs from Willapa, Wash. (57995); 507 specimens of plants from Maryland, Washington, D. C., and vicinity (58118; 58559).

MACBETH-EVANS GLASS COMPANY, Pittsburgh, Pa.: Miscellaneous collection of glass articles (58456).

MCCONATHY, Mrs. RICHARD, Ocala, Fla.: United States gold coin—quarter dollar of 1868 (58076). (See under Mrs. Amelia Lee Smith Miller and Thomas Jefferson Smith.)

MCCOOL, T. H., AND COMPANY, New York City (through The Decorus Manufacturing Company): 6 specimens of domestic silk fabrics decorated by The Decorus Manufacturing Company with the airograph machine (57669).

MCCULLOCH, ALLAN R., Australian Museum, Sydney, New South Wales, Australia: 2 specimens of giant crab, *Pseudocarcinus gigas* (57365).

MACDONALD, A. W., Marfa, Tex.: 2 small specimens of cyrtolite and a fossil shell (57353).

MCDONALD, N. A., Seattle, Wash.: Large golden beetle, *Plusiotis resplendens*, from Central America (58383).

MCFARLAND, HORACE, New York City: 8 silver, 5 bronze and 2 copper coins (57648; 57721).

MACKENZIE, K. K., New York City: Specimen of phanerogam, *Bassia hirsuta*, from New Jersey (57861: exchange).

MCLANE, Mrs. ALLAN, Washington, D. C. (through Mrs. Julian James): Ethnologica, art objects, souvenirs, etc., from various parts of the world—"The Allan McLane Collection" (58424: loan); a large, oval, covered basket from Mexico, a pair of snow shoes from Canada, an alligator skin from Florida, and 3 undecorated calabashes (58497).

MCMAHON MUSEUM. (See under Quetta, Baluchistan, India.)

MCMULLIN, D. J., U. S. Naval Station, Tutuila, American Samoa: 3 specimens of plants from Samoa (58325).

MCROY, JOHN T., Bennington, Vt.: Signature of Sitting Bull (57695).

MADISON, CHRIS F., Juneau, Alaska: Granite hammer with ax or pick point, from Shelter Island, southeastern Alaska (57308).

MAHIN, Mrs. FRANK W., American Consulate, Amsterdam, Netherlands: 43 pieces of laces and embroideries (58071: loan).

MALNATI, Miss VIRGINIA, Washington, D. C.: Specimen of adder's-tongue, *Ophioglossum*, from the District of Columbia (58403).

MANILA, BUREAU OF SCIENCE. (See under Philippine Islands, Government of the.)

MANILA, UNIVERSITY OF THE PHILIPPINES. (See under Philippine Islands, Government of the.)

MANN, WILLIAM M., Bussey Institution, Boston, Mass.: Specimen of cockroach, *Myrmecoblatta rehni* (58052: exchange).

MANNING, Mrs. MARY H., Fort Bidwell, Cal. (through Mr. W. W. Eggleston): 8 specimens of plants from California (58232).

MANSFIELD, W. C., U. S. Geological Survey, Washington, D. C.: A quartz geode from near Bainbridge, Ga. (57825).

MARBLE ARMS AND MANUFACTURING COMPANY, Gladstone, Mich.: Double-barrel rifle, "Game Getter" (58253).

MARCUSE, BERNHARD, New York City: 2 specimens of asbestos tile (57488).

MARINE BIOLOGICAL LABORATORY, Woods Hole, Mass. (through Mr. George M. Gray, curator): Insect, *Lepidopa venusta*, 2 specimens of mollusk, *Glottidia pyramidata*, and 2 specimens of roach, *Blaberus atropos* (58200).

MARSH, Dr. C. D., Bureau of Plant Industry, Washington, D. C.: 4 microscopic slides of type specimens of crustacean, *Diaptomus virginiensis*, and mounts of *D. tyrelli* (58123).

MARSHALL, GEORGE, U. S. National Museum: Star-nosed mole, *Condylura cristata;* pine mouse; 4 specimens

MARSHALL, GEORGE—Continued.
of cedar waxwing, *Ampelis cedrorum;* and a specimen of oak, all from Maryland (57148; 57807; 57916; 58432).

MARSHALL, HENRY R., Halifax, N. C.: 4 fishes, including examples of *Centrarchus macropterus* and *Pomoxys annularis* (57294).

MARTIN, Dr. J. C., U. S. National Museum: 2 samples of clay used in sizing paper (58006).

MASON, FRANK R., Germantown, Pa.: 76 longicorn beetles from South America and Borneo (57546: exchange).

MASON, S. G., U. S. Geological Survey, Washington, D. C.: 41 specimens of Cretaceous invertebrate fossils from Prince Georges County, Md. (57597).

MASSACHUSETTS MOHAIR PLUSH COMPANY, Lowell, Mass.: A series of specimens illustrating the manufacture of mohair plushes (57533).

MATIEGKA, Prof. J., Prague, Bohemia (through Dr. Aleš Hrdlička): 8 prehistoric skeletons, 4 prehistoric skulls and 5 fragments of pottery, from Bohemia (58528: collected for the Museum).

MATTES, JOSEF, Brooklyn, N. Y.: 14 larvæ of Lepidoptera (58195).

MAUL, G. H., Port Arthur, Tex.: Fragmentary human and alligator bones, potsherds and shells, from a shell-bank near Port Arthur (58218).

MAXON, WILLIAM R., U. S. National Museum: 210 specimens of plants from the District of Columbia and vicinity (57278; 57876; 58449); 50 specimens of plants from Maryland (57484).

MAYER, Dr. ALFRED G., Carnegie Institution of Washington: 30 corals, representing about 6 species, from Barbados (58268); about 300 corals representing some 75 species, calcareous algæ, bottom samples and lithologic specimens, from Murray Island, Australia (58453).

MAYNARD, C. J., West Newton, Mass.: 150 specimens, representing 39 species, of Bahama land shells, cerions (58068: purchase).

MAZA, Dr. M. G., Catedrático de Botánica de la Universidad Nacional, Havana, Cuba: 8 specimens of phanerogams, *Bauhinia*, from Cuba (57298).

MEARNS, Lieut. Col. EDGAR A., U. S. Army (retired), U. S. National Museum: 2 bird skins from Great Falls, Va. (57160); fresh-water mollusks (57267).

MELL, C. D., Bureau of Chemistry, Washington, D. C.: 12 specimens of plants (57974).

MEMBREÑO, Dr. ALBERTO, minister of Honduras at Washington: Obsidian core found in a cave of the mountains of Honduras, near Puerto Cortes (57599).

MERRIAM, Dr. C. HART, Washington, D. C.: Fresh-water shells from the Humboldt River sink, Nev. (57881).

MERRIMACK MANUFACTURING COMPANY, Lowell, Mass.: Specimens of printed cotton dress goods and drapery fabrics (58197).

METCALF, The Misses ELIZABETH HENSHAW and SARAH SPRAGUE, Worcester, Mass.: Ethnological articles from the Philippine Islands (57787: loan).

MICHIGAN, UNIVERSITY OF, MUSEUM OF ZOOLOGY, Ann Arbor, Mich. (through Dr. Alexander G. Ruthven, director): 7 lots of crustaceans, including type material, from Santa Marta Mountains, Colombia, collected by the Bryant Walker Expedition and described by Dr. A. S. Pearse (57651); 2 Formosan squirrels (58117: exchange); 7 paratypes of crabs—*Pseudothelphusa clausa* and *P. pearsei*, from Colombia (58490).

MIGEL, M. C., & COMPANY, New York City: 12 pieces of taffeta silk, "Mexixe Pussy Willow" (57318).

MILLER, A. L., Delray, Fla.: An Indian skull found in a mound near Delray (57214).

MILLER, Mrs. AMELIA LEE SMITH, Bardstown, Ky. (through Mrs. Richard McConathy): United States gold dollar of 1853, octagonal, with ring in rim (58408).

MILLER, Prof. A. M., Kentucky State University, Lexington, Ky.: 2 exhibition specimens of Ordovician sponges (57257).

MILLER, Mrs. E. P., Alexandria, Va.: Turtle, *Clemmys guttatus*, from Fairfax County, Va. (57444).

MILLER, GERRIT S., jr., U. S. National Museum: 3 specimens of crustacean, *Cambarus affinis*, from Alexandria, Va. (57828); yellow-breasted chat, *Icteria virens*, from Virginia (58366).

MILLER, Miss MARY F., Washington, D. C.: 145 specimens of mosses and lichens, from the District of Columbia and vicinity (57705; 58026).

MILWAUKEE, PUBLIC MUSEUM OF THE CITY OF, Milwaukee, Wis.: Beetle, *Phengodes longicornis* var. (58106).

MINER, Mr. and Mrs. L. D., Washington, D. C.: Blue-gray gnatcatcher, *Polioptila cærulea*, from Washington (58438).

MINGAYE, JOHN C. H., Department of Mines, Sydney, New South Wales, Australia: A 160-gram piece of the Gilgoin No. 7 meteorite (58502).

MISSISSIPPI, GEOLOGICAL SURVEY OF, Jackson, Miss.: Washings containing bryozoans and other Tertiary fossils from Mississippi (57208).

MISSOURI BOTANICAL GARDEN, St. Louis, Mo.: 19 specimens of plants collected in the East Indies by Messrs. Hooker and Thomson (57925: exchange).

MITCHELL, Hon. J. D., Victoria, Tex.: 65 specimens and 4 tubes of earthworms, from various localities in Victoria County, Tex. (57372; 57463; 57489; 57501; 57525; 57899).

MITCHELL, MASON, American consul, Apia, Samoa: Squilla, *Lysiosquilla maculatus*, from Apia (57856).

MONADNOCK MILLS, Claremont, N. H.: Marseilles bedspread (58196).

MONARCH COAL & MINERAL COMPANY, Excelsior, Mo.: A cube of coal (58522).

MONNET, Dr. PAUL, French Consulate, San Francisco, Cal.: 16 living specimens of Cactaceæ and a dried gourd, from Arizona (57163; 57165; 57207; 57577); 40 specimens of plants from Nevada, Arizona and California (57255: exchange).

MONROE, CHARLES E., Milwaukee, Wis.: 37 specimens of *Aster* from Wisconsin (57587: exchange).

MONROE, F. C., Holmes, Iowa: The shed skin of a snake, *Eutænia* (57193).

MONTGOMERY, J. E., Stark, N. H.: Rainbow trout, *Salmo irideus*, from New Hampshire (58443).

MONTGOMERY, J. R., COMPANY, Windsor Locks, Conn.: Samples of cords and dress trimmings showing the use of metal threads and brilliants (57563).

MOODIE, Miss MARION E., Calgary, Alberta, Canada: 257 specimens of plants from Alberta (57600; 57677). Purchase.

MOODIE, Prof. ROY L., University of Kansas, Lawrence, Kans.: Reptiles and batrachians from Kansas (57289: exchange).

MOORE, CLARENCE B., Philadelphia, Pa.: Indian skeletal material from Alabama and Tennessee, collected by the donor (58140; 58353); large pottery vase from a mound on the Bennett place, Marion County, Tenn. (58442).

MOORE, P. P., Cumberland, Ohio: Moth, *Citheronia regalis* (57195).

MOORE, Dr. WILLIAM CABELL, Washington, D. C.: 5 specimens of plants from the vicinity of Bluemont, Va. (58491).

MORGAN, Hon. LEWIS L. (See under C. K. David.)

MORRIS, Miss FRANCES. (See under Mrs. Newton W. Gilbert.)

MORTON, Mrs. LEVI P., Washington, D. C.: Nine specimens of brocades, embroideries and silk (58145: loan).

Moshannon Coal Mining Company, Osceola Mills, Pa.: A lump of coal (57910).

Mosonyi, Emilio, San Salvador, Central America: Large jade ax from Alta Verapaz, Guatemala, Central America; small stone chisel from Ahuachapan, San Salvador; and a clay figure from Tepecoyo, San Salvador (58276).

Moxley, George L., Los Angeles, Cal.: 50 specimens of plants from California (58112; 58492).

Moyer, William J., Grand Junction, Colo.: A specimen of carnotite and 1 of lignite partially replaced by carnotite, from Grand County, Utah (57901).

Muck, Charles, Pasadena, Cal.: 3 specimens of aluminium-bearing mineral (58297).

Munroe, Miss Phoebe, New York City (through Mrs. Julian James): Widow's cap worn during the '80s (57443).

Murie, O. J., Portland, Oreg.: Batrachians—*Hyla regilla*, *Rana aurora* and *Bufo woodhousei*, from Oregon (58270).

Murk, H., Lillooet, British Columbia, Canada: 25 Jurassic fossils from British Columbia (57623).

Murphy, D. J., American consul, Amsterdam, Netherlands (through Bureau of Foreign and Domestic Commerce, Washington, D. C.): Specimen of vegetable fiber, kapok, *Ceiba pentandra* (57265).

Musselman, M. E., Milton, Pa.: Luna moth, *Tropæa luna* (57416).

Myers, Mrs. Olive B., Thurmont, Md.: Brocaded Chinese robe made for Emperor Hein Fung and taken from the Yuen-Ming-Yuen, Pekin, when that palace was destroyed by fire in 1860 by order of the English and French allies (58429: loan).

Nassau Stamp Company, New York City: 116 United States postage stamps of the issues of 1847, 1851, 1857, 1861, 1862, 1867, 1869, 1871, 1873, 1875, 1879, 1883, 1887, 1890, 1895, 1898, 1901 and 1907, special printings of 1875 and 1880, and postage due, departmental and newspaper stamps (57517); 39 stamps of the United States and Puerto Principe (57675); 1,143 United States stamped envelopes (57885); 389 foreign stamps, mostly 20th century, French, Portuguese and Spanish Colonies (58126); 19 United States stamped envelopes and carrier stamps (58132). Exchange.

Nassau Stamp Company—Continued.

Natal Herbarium, Berea, Durban, Natal, Union of South Africa: 102 specimens of plants from South Africa (57241: exchange).

National Academy of Sciences, Washington, D. C.: Fragments of 12 meteorites (58216); a collection of apparatus and photographs of astronomical subjects, which were used by the late Henry Draper, one of the first to apply photography in astronomical research (58310). Deposit.

National Association of Portrait Painters (through Mr. Earl Stetson Crawford, secretary, New York City): 27 paintings in oil (58036: loan for special exhibition).

National Rifle Association of America, Washington, D. C.: Swiss military rifle, Russian military rifle, French military rifle, British military rifle, Mannlicher military rifle, and Winchester rifle made especially for target shooting (58330: loan).

National Society of the Colonial Dames of America, Washington, D. C.: Dress sword of Baron von Steuben, presented in 1794 to his aid-de-camp, Col. William North, and owned by his great-granddaughter, Mrs. Francis B. Austin, Summit, N. J.; lent through the Colonial Dames of the State of New York (58329); 3 2-tined forks of the colonial period, presented to the Society by Mrs. R. G. Hoes, a member of the District Society of the Colonial Dames (58420). Loan.

NATURHISTORISKA RIKSMUSEUM, ETNOGRAFISKA AFDELNINGEN. (See under Stockholm, Sweden.)

NAVY DEPARTMENT:

23 firearms and a sword, from the Washington Navy Yard (58284); miscellaneous relics of the *Jeannette* North Polar Expedition of 1879–1881 (58473).

Bureau of Navigation: Bronze medal of honor of the type awarded by the Navy Department for distinguished services; also a medal of honor button (58285: loan).

NELSON, C. Z., Galesburg, Ill.: 4 living specimens of Cactaceae and 3 specimens of *Agave*, from Colorado (57579); 2 living specimens of Cactaceae (58208; 58233: exchange).

NEW JERSEY ZINC COMPANY, THE, Franklin Furnace, N. J.: A piece of crystalline white limestone from the hanging wall, representing the Franklin limestone in which the ore body occurs (58259).

NEW MEXICO COLLEGE OF AGRICULTURE AND MECHANIC ARTS, State College, N. Mex.: 3,921 specimens of plants from New Mexico (58279; 58374). Exchange.

NEW YORK BOTANICAL GARDEN, Bronx Park, New York City: 1,212 specimens of plants mainly from the West Indies (57280; 57330; 57470; 57739; 58180; 58324); 262 specimens of mosses from the Philippine Islands, collected by Mr. R. S. Williams (57338); 2 specimens of plants from Bermuda, and 2 palms from Curaçao (57402; 57725); specimen of *Acnida* from New York (57499); 8 photographs and 4 specimens of Cactaceae (57790; 57982); 29 living specimens of Cactaceae (58207); 153 specimens of marine algæ, chiefly from Peru and the West Indies (58262); specimen of fern, *Notholaena*, from Mexico (58391). Exchange.

NEW YORK STATE MUSEUM, Albany, N. Y.: Exhibition slab containing specimens of the Devonian glass sponge, *Hydnoceras bathense* (57522).

NICKLES, JOHN M., Washington, D. C.: About 6,000 specimens of Ordovician and Silurian fossils from Illinois, Indiana and Kentucky (57363: purchase).

NOKES, Dr. I. D., Los Angeles, Cal. (through Mr. Edward J. Brown): 3 bird skins from California (58173).

NORTH, Prof. H. B., Rutgers College, New Brunswick, N. J.: A specimen of pseudomorph of limonite after marcasite (57415: exchange).

NORTH CAROLINA STATE DEPARTMENT OF AGRICULTURE, Raleigh, N. C. (through Mr. R. W. Leiby): Crustacean, *Hcpatus ephcliticus*, from Wrightsville Beach, N. C. (58124).

NORTH DAKOTA, UNIVERSITY OF, University, N. Dak.: 8 fishes—*Ichthyomyzon concolor*, *Scaphirynchus platorhynchus*, *Lepidosteus platostomus*, *Moxostoma aureolum*, *Ictiobus cyprinella*, *Hiodon tergisus*, *Esox lucius*, and *Stizostedion canadense* (58299: exchange).

NORTON COMPANY, Worcester, Mass.: Miscellaneous collection of alundum abrasives (57903).

NORTON, J. B., Bureau of Plant Industry, Washington, D. C.: 10 specimens of catbrier, *Smilax*, from the vicinity of Washington (58137).

NORTON, J. D., Punta Gorda, British Honduras: About 155 specimens of parasitic Hymenoptera (57678).

NUSSMANN, Rev. O., Sakti, Central Provinces, British India: Sloth-bear from India (57951: purchase); a hare and 2 owls from India (57953).

OBERHOLSER, H. C., Bureau of Biological Survey, Washington, D. C.: Nest of Cairns' warbler, *Dendroica cærulescens cairnsi*, from North Carolina (57158).

OBERTHÜR, M. RENÉ, Rennes, France: 47 insects (57405: exchange).

OLDBERG, C. R., Los Angeles, Cal.: 84 archeological specimens from the District of Columbia, Virginia and Arizona (57794).

OLDROYD, Mrs. T. S., Long Beach, Cal.: 17 specimens of mollusk, *Thais emarginata*, from various localities in California (58482).

OLDS MOTOR WORKS, Lansing, Mich.: Gasoline automobile constructed in Lansing, in 1896, by Mr. R. E. Olds, with the assistance of Mr. Frank Clark (57967).

OLIVER, JAMES, Chignik, Alaska: About 40 mollusks, 3 isopods and 15 insects, collected in Alaska (57812).

OLMSTED, Miss HELEN A., U. S. National Museum: Tortoise, *Terrapene carolina*, from the District of Columbia (58487).

ORCUTT, CHARLES R., San Diego, Cal.: Lot of drift inclosing minute marine shells, from San Diego Bay, Cal. (58448).

OREGON AGRICULTURAL COLLEGE (through Prof. H. S. Hammond), Corvallis, Oreg.: 87 specimens of plants from Oregon (57703; 57772; 57891).

ORINOKA MILLS, THE, Philadelphia, Pa.: Specimens of cotton tapestry, tub and sunfast draperies, and yarns and punched cards to illustrate intermediate stages in the manufacture of upholstery and drapery fabrics (57815).

ORROK, GEORGE A., Captiva, Fla. (through Bureau of Plant Industry, Washington, D. C.): 60 specimens of plants from Florida (58209).

OSBURN, Dr. R. C., Barnard College, Columbia University, New York City: Dipteran, *Eristalis rupium* (58193: exchange).

OUTWATER, Mrs. K., Washington, D. C.: 5 specimens of iron concretions artificially modified, found 50 feet beneath the surface at the terra-cotta works, Brookland, D. C. (58369).

PACIFIC MILLS, Lawrence, Mass. (through Lawrence and Company, Boston, Mass.): Specimens of printed and piece-dyed cotton dress goods and draperies (58009).

PACKARD, Mrs. ELIZABETH WALCOTT, Andover, Mass. (through Prof. T. D. A. Cockerell): A collection of colored figures of lepidopterous larvæ, intended for publication by Dr. A. S. Packard (57898).

PAGE, Maj. W. N., Washington, D. C. (through Dr. David White): A bowlder from the Mill Creek coal mine near Ansted, W. Va. (58078).

PALERMO, ITALY, ROYAL BOTANICAL GARDEN (through Mr. V. Riccobono, head gardener): Living specimen of cactus, *Borzicactus ventimiliæ* (57581: exchange).

PALMER, Mrs. ESTELLE, Chicago, Ill.: 29 objects of the North American Indian, which belonged to the donor's husband, the late Maj. George Henry Palmer, U. S. Army (58289).

PALMER, WILLIAM, U. S. National Museum: 3 bird skins from Virginia (57603); 5 bird skins from Maryland (57680); 12 specimens of mollusk, *Macoma constricta*, from throats of the white-winged scoter, *Oidemia deglandi*, from Plum Point, Md. (57712); Wilson's thrush, *Hylocichla fuscescens* (58339).

PALMER, W. J., New York City: Specimen of carnotite from Lincoln County, Nev. (57535).

PALMETTO DRUG COMPANY, Palmetto, Fla.: 2 specimens of crustacean, *Meinertia deplanata* (58291).

PANAMA-CALIFORNIA EXPOSITION, San Diego, Cal.: (through Dr. E. L. Hewett): 877 archeological and 12 ethnological specimens (58532: exchange).

PARISH, S. B., San Bernardino, Cal.: A specimen of *Selaginella*, and 14 living specimens of Cactaceæ, all from California (58150; 58182; 58293).

PARMENTER, B., Rutland, Vt.: 15-spotted "lady beetle," *Anatis 15-punctatus* (58379).

PATTISON, W. D., Winamac, Ind.: Partial skeleton of a mastodon, consisting of 22 elements (57622).

PEACE DALE MANUFACTURING COMPANY, Peace Dale, R. I.: 6 samples of cloth having a worsted filling and a woolen warp (57500).

PEARY, Rear Admiral ROBERT E., U. S. Navy (retired), Washington, D. C.: 3 gold medals awarded to Rear Admiral Peary in recognition of his Arctic explorations and a bronze Elisha Kent Kane medal presented to him by Mr. Harry B. Kane; also photographs of a bronze tablet and a silver shield, presented in recognition of his Arctic achievements (58416: loan).

PELGRAM AND MEYER, New York City: 11 samples of fancy ribbons (57564).

PENNELL, Dr. F. W., New York Botanical Garden, New York City: 7 specimens of phanerogams (57358; 57860).

PENNINGTON, L. H., Syracuse University, Syracuse, N. Y.: Specimen of *Selaginella* from Saskatchewan (57923).

PENNSYLVANIA, UNIVERSITY OF, Philadelphia, Pa.: 62 specimens of phanerogams, Scrophulariaceae, from the eastern part of the United States, collected by Dr. F. W. Pennell (57584: exchange).

PERKINS, JOHN U., Smithsonian Institution: 19 numbers of the magazine "The Inland Printer"; an engraving, "The Rescue," by J. Sartain, after the painting by John Blake White; and 6 poster stamps (Burton Holmes Travelogue Series) (57820).

PERRY, Mrs. R. Ross, Washington, D. C.: A framed sampler made in Scotland by Jean Boyle about 125 years ago (58425: loan).

PERTH, WESTERN AUSTRALIA, WESTERN AUSTRALIAN MUSEUM AND ART GALLERY: 21 bird skins from Australia (57201: exchange).

PETERSON, WILLIAM C., Canaveral, Fla.: Cottonrat, *Sigmodon hispidus* (58055).

PFEIFFER, Miss NORMA E., University of Chicago, Chicago, Ill.: Specimen of phanerogam, *Thismia americana*, from the vicinity of Chicago (57469).

PHILADELPHIA COMMERCIAL MUSEUM, Philadelphia, Pa.: Specimen of silk gut and 5 samples of commercial silk cocoons (57520).

PHILIP, Hon. HOFFMAN: 26 ethnological objects from Abyssinia (57746; 58109). Loan.

PHILIPPINE ISLANDS, GOVERNMENT OF THE, Manila, P. I.:

Executive Bureau: 2 stamps of the Philippine Islands, consisting of a 4-centavo regular postage stamp and a 20-centavo special delivery stamp—received through the Bureau of Insular Affairs, War Department (57346).

Bureau of Science: 5,740 specimens of plants from the Philippine Islands (57349; 57436; 57515; 57989; 58414); 120 specimens of plants collected in Kamerun by Zenker and 170 specimens chiefly from China (57397). Exchange.

University of the Philippines: 11 specimens, representing 11 species, of Philippine Alcyonaria (57376: exchange).

PHOTOTYPE ENGRAVING COMPANY, Philadelphia, Pa. (through Mr. L. R. Benedict): 27 halftones, duotones, photographs and progressive color proofs (58043).

PIKE MANUFACTURING COMPANY, Pike, N. H.: Miscellaneous collection of abrasives (57977).

PILLING, Mrs. ELIZABETH C., Washington, D. C.: An oil painting, "Fisher Girl of Picardy," by Miss Elizabeth Nourse, presented by Mrs. Pilling in memory of her husband, John Walter Pilling (58041).

PILSBRY, Dr. H. A., Academy of Natural Sciences, Philadelphia, Pa.: 11 specimens of mollusk, *Sonorella*, from Arizona, topotypes of species not hitherto represented in the Museum collections (58096).

PINE RUN COAL COMPANY, New Bethlehem, Pa.: Cube of Upper Kittanning cannel coal (57975).

PIPER, Prof. C. V., Bureau of Plant Industry, Washington, D. C.: Fragments of types of 3 species of sedges, *Carex* (58381).

PITTIER, Prof. H., Bureau of Plant Industry, Washington, D. C.: 6 living specimens of cacti from the Canal Zone (57190); lantern-fly, *Fulgoria lanternaria* (57256); land shell from Gatun Lake, Panama, at the foot of Sta. Rita Mountains (58319); 9 skeins of artificial silk yarns manufactured in Frankfort, Germany (58523); 18 specimens of wood collected in Panama by Prof. Pittier (58530: collected for the Museum).

PITTSBURGH COAL COMPANY, Pittsburgh, Pa.: 3 sample cubes of coal—Pittsburgh domestic coal, Youghiogheny gas coal and Pittsburgh steam coal (57978).

PITTSBURGH CRUSHED STEEL COMPANY, Pittsburgh, Pa.: Various crushed steel products (58307).

POND, Dr. ELINOR, Manila, P. I.: Corals, sea urchins, a starfish, mollusks and fossils (57211).

PORTER, Prof. CARLOS E., Santiago, Chile: 10 amphipods, *Hyalella azteca inermis*, from Santiago (57880).

PORTER, Mrs. H. K., Washington, D. C.: Collection of bags, brocades, embroideries, appliqués, etc., and 41 bonnets of the 19th century (57776); collection of laces, embroideries and brocades (58000). Loan.

POST, E. J., Tampa, Fla.: A powder horn and a bark blanket of the Patuca Indians, Honduras (57466); about 100 specimens of silicified fossils from the silex beds at Ballast Point, Tampa Bay (Oligocene age) (57474).

POST OFFICE DEPARTMENT: 14 sets of specimen stamps, etc., in triplicate (approximately 2,943 specimens), received from the International Bureau of the Universal Postal Union, Berne, Switzerland (57659; 57818; 58040; 58178; 58352; 58418); 48 specimen stamps, etc., and 5 specimens of ordinary postage stamps and 4 of official postage stamps of the Republic of Liberia, received from the International Bureau of the Universal Postal Union, Berne, Switzerland (57927; 58179); 4 sample postage stamps received from the State Department, issued by the Patriotic Postage Stamp Office of St. Petersburg, Russia, as a means of raising funds for the benefit of the families and orphans of the soldiers killed or wounded during the present European war (57946); 1,160 United States imperforate 1¢ stamps, 400 of which are from ordinary plate, 400 from coil plate and 360 from stamp book plate, and 170 imperforate 2¢ stamps from rotary plate (58120); a set of die proofs (413 specimens), unmounted, of the various issues of United States postage stamps, 1847–1914, similar to the set prepared by the Post Office Department for exhibition at the Panama-Pacific Exposition (58223).

PRESTON, Mrs. FRANCES F. CLEVELAND, Princeton, N. J.: A brocade silk-and-velvet gown worn by the lender at the White House (57843: loan).

PRETZ, HAROLD W., Allentown, Pa.: 22 specimens of plants from Florida (57626).

PROVINCIAL MUSEUM. (See under Halifax, Nova Scotia.)

PURDY, Mrs. C. V., Washington, D. C.: An oil painting by Thomas Cole, entitled "Autumn"—one of a series of four paintings of the seasons (58471: loan).

PURVIS, J. M., Turners, Fla.: A fossil tooth from Florida (57314).

QUAKER LACE COMPANY, Philadelphia, Pa.: A series of specimens and photographs illustrating the manufacture of machine-made laces and lace curtains (58072).

QUETTA, BALUCHISTAN, INDIA, McMAHON MUSEUM (through Mr. W. D. Cumming, curator): 10 snakes (57842).

RAINEY, W. J., New York City: Lump of coal (58083).

RAMSDEN, CHARLES T., Guantanamo, Cuba: 7 Cuban crustaceans representing 5 species (57940).

RANDOLPH, Mrs. WILLIAM MANN. (See under Miss Cornelia J. Taylor.)

RATHBUN, Miss MARY J., U. S. National Museum: 32 specimens, representing 2 species, of marine mollusks from Portrush, Ireland (57453); specimens of mollusk, *Polygyra albolabris*, from Sugar Loaf Mountain, Md. (57496).

RATHBUN, Mrs. RICHARD, Washington, D. C.: A five-dollar Massachusetts bill of the issue of May 5, 1780 (58044).

RAVENEL, W. DE C., U. S. National Museum: Official souvenir bronze medal of the Panama-Pacific International Exposition, San Francisco, 1915 (58203).

READ, A. C., Santa Barbara, Isle of Pines, West Indies: Skin of Jamaican mockingbird, *Mimus polyglottos orpheus*, from the Isle of Pines (58346).

READING, Mrs. FANNIE W., Washington, D. C.: 7 ethnological objects from the western part of the United States (57225: loan).

REDFIELD, Mrs. J. M., Marshall, Mich.: A slab of Marshall sandstone (58396).

REED, E. L., College Station, Tex.: Specimen of sundew, *Drosera annua*, from Texas (58533).

REED, LEON F., New York City: Moth, *Philosamia cynthia* (57260).

REGAN, JAMES, 3RD, Washington, D. C.: A Colt's revolver (57235).

REGINA LACE COMPANY, Central Falls, R. I.: 2 half-yard samples of lace made with artificial silk (57360).

REID, Mrs. BRUCE, Port Arthur, Tex.: Double nest of Baltimore oriole, *Icterus galbula*, from Texas (57987).

REMINGTON ARMS-UNION METALLIC CARTRIDGE COMPANY, New York City: Remington repeating shotgun, model 10 (58274).

RENDALL, R. J., & Co., New York City: Sample of wool crêpe dress goods, Lupin's "Frisoline" (57204).

REPUBLIC IRON & STEEL COMPANY, Birmingham, Ala. (through Prof. Eugene A. Smith): 8 samples of iron ore (red ore) illustrating changes in character, selected by Mr. G. G. Dobbs (57734).

RICE, ARTHUR P., Brookline, Mass.: An old Maya drum, called "Sacatan" (58025).

RICHARDS, GRACIE K., Washington, D. C.: 6 Cashmere shawls (58385).

RICHARDS, Dr. T. W., U. S. Navy: 4 bird skins from Cuba (58158).

RICHARDSON, Col. W. P. (See under W. A. Dickey and George Treat.)

RICHMOND, CHARLES W., U. S. National Museum: 3 mounted birds, including the type of *Nyctea scandiaca*, var. *arctica* (57602).

RIDDALL, H. K., Goodsprings, Nev.: 3 samples of gold-platinum ore from southern Nevada (58427).

RIDDING, W. E., Guatemala, Guatemala: Humming-bird moth, *Epistor lugubris* (57560).

RIDGWAY, ROBERT, U. S. National Museum: Screech owl, *Otus asio*, and 2 flying squirrels, from Illinois (57665); reptiles, batrachians, crustaceans, mollusks, fishes, insects and mammals, from Olney, Ill. (57724).

RILEY, J. H., U. S. National Museum: 20 bird skins from Erlangen, Bavaria (57319); 15 small mammals and 3 bird skins, from Virginia (57593; 57741).

RIMMER, Miss CAROLINE HUNT, Lexington, Mass.: Original cast of the statue "The Falling Gladiator," by Dr. William Rimmer, father of the donor (58275).

RIPLEY, Miss MARIE, Andover, Mass.: Headdress of Mrs. Franklin Pierce, 1853–1857 (57222: loan).

RITTER, Prof. W. E., La Jolla, Cal.: 2 specimens of crinoid, *Florometra serratissima*, from off San Diego, Cal. (58468: exchange).

ROBERTS, W. F., Washington, D. C.: Snake, *Coluber obsoletus*, from Alexandria County, Va. (57161).

ROBERTSON, J. D., Ocala, Fla. (through Dr. O. P. Hay): An upper molar of a fossil species of tapir, *Tapiris terristris*, and a lower molar of a fossil horse, *Equus leidyi* (57961).

ROBINSON, Lt. Col. W., U. S. Army, West Point, N. Y.: A small collection of insects from Baguio, P. I. (57896).

ROCKY MOUNTAINS PARK MUSEUM, Banff, Alberta, Canada (through Mr. N. B. Sanson, curator): Land and fresh-water shells from Alberta (57760).

ROE, JOHN MCKINSTER, Venice, Fla.: Sea-crab, *Calappa flammea*, from the Gulf of Mexico (57811).

ROEBLING, WASHINGTON A., Trenton, N. J.: A nugget of osmiridium from Australia (57711).

ROFKAR, W. F., Port Clinton, Ohio: Box turtle from the District of Columbia (57914).

ROIG, Dr. MARIO SANCHEZ, Havana, Cuba: 10 crustaceans, consisting of 6 specimens of *Cambarus cubensis rivalis*, 3 of *Cambarus cubensis* and 1 of *Epilobocera cubensis* (58046).

ROOT, F. M., Johns Hopkins University, Baltimore, Md.: Crustacean, *Pinnixa cylindrica* (58045).

ROSE, Dr. J. N., Carnegie Institution of Washington, Washington, D. C., and WALTER DEANE: 15 living specimens of cactus, *Opuntia opuntia*, from Virginia (58231: collected for the Museum).

ROSE, Dr. and Mrs. J. N.: Shells, representing about 32 species, from the beach at Antofagasta, Chile (57663).

ROSENBERG, E., Copenhagen, Denmark (through Dr. A. G. Böving): Bred life-history material of beetles, representing 94 species (57679); biological material of 68 species of Coleoptera (58512).

ROSENBERG, W. F. H., London, England: Skin of Allen's gallinule, *Porphyriola alleni* (57447: purchase).

ROSS AND REPUBLIC MARBLE COMPANY, Knoxville, Tenn. (through Dr. T. Nelson Dale): A fine exhibition specimen of marble with fossils, from the company's quarry at Luttrell, Tenn. (57541).

ROYAL BOTANIC GARDENS. (See under Kew, London, England.)

ROYAL BOTANICAL GARDEN. (See under Palermo, Italy.)

RUSSELL, B. R., San Saba, Tex.: 7 living specimens of Cactaceæ from San Saba (58234: exchange).

RUST, H. J., Coeur d'Alene, Idaho: 10 specimens of plants from Idaho (58047); 18 specimens of willows, *Salix*, from Idaho, received through the Bureau of Plant Industry, Washington, D. C. (58156).

RUTH, Prof. ALBERT, Polytechnic, Tex.: 156 specimens of plants from Texas (57179; 57191; 57313; 57704; 57786); 5 specimens of phanerogams, *Laciniaria*, from Tennessee (57335: exchange).

RUTH, JOHN A., Clifton, N. J.: 20 specimens of plants from New Jersey (57922).

RUTLEDGE, H. C., Piney Flats, Tenn.: 2 specimens of beetle, *Dynastes tityus* (58111).

RUTOT, Prof. A., Musée Royal d'Histoire Naturelle de Belgique, Brussels, Belgium: A series of neolithic stone implements from Spiennes and northern Belgium (85 originals and 5 casts) (57396: exchange).

RUXTON, PHILIP, INCORPORATED, St. Paul, Minn.: 39 specimens used in the manufacture of printing ink and 22 photographs, collected and arranged by Mr. Harry S. Thompson (58266).

SALL MOUNTAIN COMPANY, Chicago, Ill.: Miscellaneous collection of asbestos products (57830).

SALT'S, HOUSE OF, INCORPORATED, New York City: 7 specimens of textile fur fabrics (57283).

SÃO PAULO, BRAZIL, MUSEU PAULISTA (through Dr. H. von Ihering, director): 68 Brazilian crustaceans (57932).

SASKATCHEWAN DEPARTMENT OF AGRICULTURE, Regina, Saskatchewan, Canada (through Mr. H. H. Mitchell): Rabbit, *Sylvilagus nuttalli grangeri* (57840).

SATCHWELL, Mrs. M. W., Jacksonville, Fla.: 2 specimens of *Botrychium obliquum*, from Florida (58152).

SAVAGE, Mrs. JOSÉ R. F., San Juan, P. R. (through Mrs. Julian James): A gray silk Quaker bonnet (58252: loan).

SCHMID, EDWARD S., Washington, D. C.: 2 skeletons of birds, *Gracula intermedia* and *Kittacincla* sp. (57181); Wilson's petrel, *Oceanites oceanicus*, from Marshall Hall, Md. (57254); Bodinus' parrot, *Amazona bodini*, with body skeleton (57604); Sallé's parrot, *Amazona ventralis* (57666); skeleton of a macaw, *Ara ararauna* (57839); a "New Zealand rabbit" (58080); chopi boat-tail, *Gnorimopsar chopi*, from South America (58103).

SCHMITT, H. RUDOLF, Chevy Chase, D. C.: 2 butterflies from Brazil (58060).

SCHRAMMEN, Dr. A., Hildesheim, Germany: 85 specimens, representing 54 species, of Mesozoic sponges (57212: exchange).

SCHUH, Prof. R. E., Howard University, Washington, D. C.: 2 oysters from Eggemoggin Beach, Penobscot Bay (57461).

SCHUMACHER, F., AND COMPANY, New York City: A 2-yard length of Shakespeare cretonne (57521).

SCHWARZ, Dr. E. A., and R. C. SHANNON, Bureau of Entomology, Washington, D. C.: About 300 insects collected at Plummer's Island, Md. (57690).

SCIDMORE, Miss ELIZA R., Washington, D. C.: 33 specimens of Chinese and Japanese porcelains (57384: loan).

SEIDELL, F. W., Sedro Woolley, Wash.: Samples of talcose and actinolitic schist (57209).

SEMET-SOLVAY COMPANY, Syracuse, N. Y.: 16 specimens of coal products (57871).

SHANNON, R. C., Bureau of Entomology, Washington, D. C.: Salamander from Maryland (57369); 2,000 Diptera from the vicinity of Washington (57691); wood-rat and turtle from Virginia (57707; 58247). (See under E. A. Schwarz.)

SHEIP & VANDEGRIFT, INCORPORATED, Philadelphia, Pa.: 2 series, of 4 specimens each, showing the manufacture of oak and spruce phonograph horns (58386).

SHELDON, C., Woodstock, Vt. (through Bureau of Biological Survey, Washington, D. C.): Nest and 5 eggs of ruby-crowned kinglet, *Regulus calendula*, and 3 eggs of Cooper's hawk, *Accipiter cooperi*, from Vermont (58387).

SHELDON, JOHN L., Morgantown, W. Va.: Specimen of phanerogam, *Eruca eruca*, from West Virginia (57589).

SHEPARD, CHARLES U., Summerville, S. C.: A fragment, weighing 112 grams, of the Waconda meteoric stone, from the Shepard collection of meteorites (58261: exchange).

SHEPHERD, Col. C. S., Kensington, London, England: A set of otoliths of fish, *Notopterus chitala*, from India (57293: exchange).

SHEPHERD, Prof. E. S., Carnegie Institution of Washington, Washington, D. C.: 2 snakes and a frog, from California (57917); 5 snakes from California, District of Columbia, and New York (58367).

SHIPPY, N. D., Goldfield, Nev.: Specimen of corundum from California (57431); native sulphur and stibnite, from Nevada (57624).

SHOEMAKER, CLARENCE R., U. S. National Museum: 50 amphipods from Little River, D. C. (57324); about 12 crustaceans and a cœlenterate, from Chesapeake Beach, Md. (57567); 80 amphipods from the Potomac River (58236); 50 amphipods from Black Pond, Va. (58271).

SHREVE, Dr. FORREST, Desert Laboratory, Tucson, Ariz.: 6 specimens of plants from Arizona (57169; 57312; 57757).

SHUFELDT, Dr. R. W., Washington, D. C.: Nest and a young of oven bird, *Seiurus aurocapillus*, from Virginia (57176); 27 photographs representing the methods of taxidermy as practiced in the Leiden Museum, 1897, 1898 (57605).

SILVA, Dr. SIMOENS DA, Rio de Janeiro, Brazil: Stone ax, probably natural form, from the State of Bahia, Brazil (57684).

SIMPSON, W. W., Shanghai, China: 5 skins and 3 skulls of deer, *Cervus*, a specimen of musk deer, *Moschus*, and 1 of bear, *Ursus*, all from Kansu, western China (57732: purchase).

SLATER, Mrs. H. D., El Paso, Tex.: 2 specimens of plants from New Mexico (57425); 5 photographs of New Mexican plants (58185).

SLATER, WILLIAM A., Washington, D. C.: 23 oil paintings (58282: loan).

SLAYMAKER, J. J., Beaumont, Tex. (through Dr. David White): 3 specimens of a petrified fern stem (57889).

SMITH, Miss CLARA FARRAR, Washington, D. C.: 2 pieces of Venetian rose point lace (58269: loan); India shawl (58328).

SMITH, E. ARNETT, London, Ohio: Portrait, water color, of George Washington, by James Peale (57221: loan).

SMITH, Dr. ERWIN, U. S. Department of Agriculture, Washington, D. C.: 6 crustaceans collected by Mr. J. R. Johnston in the West Indies (57759).

SMITH, HARRISON E., U. S. Entomological Laboratory, West Springfield, Mass.: Type of female and allotype of male of fly, *Saskatchewania canadensis* (58081); 3 Diptera, consisting of type of *Phasia phasiatrata*, holotype of *Neopales noctuiformis*, and paratype of *Gonia distincta* (58095).

SMITH, Prof. H. H., University, Ala.: 425 specimens of plants from Colombia (58433: purchase).

SMITH, Capt. JOHN DONNELL, Baltimore, Md.: 16 specimens of plants from Central America (58049).

SMITH, Rev. MILLARD H., Candler, N. C.: 39 arrowpoints and spearheads from North Carolina (57524); 25 arrowpoints of quartz and flint, a grooved ax, a drilled piece of soapstone and a fragment of a soapstone vessel, from Hiawassee, Ga. (58480).

SMITH, THOMAS JEFFERSON, Bardstown, Ky. (through Mrs. Richard McConathy): United States gold coin—half dollar of 1870 (57683).

SMITH & WESSON, Springfield, Mass.: An automatic pistol (58037).

SMITHSONIAN INSTITUTION:

About 5,000 specimens of Cambrian fossils from China (57813); costumes and parts of costumes—specimens of the typical Quaker garb worn in the early and middle part of the 19th century—presented to the Institution by Dr. Anna P. Sharpless, of Philadelphia, Pa. (58288).

Bureau of American Ethnology: Model of a Cherokee packing basket, collected by Mr. James Mooney on the East Cherokee Reservation, Swain County, N. C., in 1914 (57699); 179 archeological objects and skeletons, collected by Dr. J. Walter Fewkes in the Lower Mimbres Valley, N. Mex., in 1914, and an earthenware vase from Casas Grandes, Chihuahua, Mexico, donated by Dr. Fewkes (57777); 3 stone figurines collected by Mrs. M. C. Stevenson among the Tewa Indians of New Mexico (58129); 5 archeological specimens and fragments of a human skeleton, from a grave near Newsoms, Va., received from Dr. W. B. Barham as a gift from himself, Mrs. J. R. Kello and Miss Mattie Kello (58177); a snipe flute forwarded to the Bureau by the Rev. A. McG. Beede, Sioux County, N. Dak. (58254).

SMITHSONIAN INSTITUTION—Contd.

National Museum, collected by members of the staff: Bartsch, Paul: 5 bats, *Macrotus waterhousei minor*, from Mulata, Cuba (57355); 6 living specimens of Cactaceæ from Cuba (57575). Bassler, R. S.: Tertiary bryozoans from the Southern States, representing 20 formations and localities (57183). Bean, B. A.: Young examples of the hammerhead shark, sharp-nosed shark, stingaree, sucking fish or remora, smooth puffer, sea robins, etc., collected at Ocean City, Md. (57274). Gilmore, C. W.: 13 concretions, 2 lots of invertebrate fossils, and various teeth, bones, etc., of vertebrate fossils from the Judith River, Claggett, and Eagle formations; 3 nearly complete and 4 partial Indian skeletons (57557). Hrdlička, Aleš: Samples of hair of white Americans of at least three generations on each side of the family, and of other races (250 specimens) (58224). Maxon, William R., and Paul C. Standley: 160 specimens of plants from the District of Columbia and vicinity (58451). Merrill, George P.: Marble and associated rocks from near Marble, Colo. (57493). Resser, C. E.: Calcite from Ram's Horn Cavern, White Sulphur Spring, Mont. (57556). Standley, Paul C.: 375 specimens of plants from Maryland and Virginia (58402). Standley, Paul C., and H. C. Bollman: 790 specimens of plants, 5 mammals and a lizard, from Rio Arriba County, N. Mex. (57399). Wood, N. R.: Reptiles, batrachians and an insect, from Florida (58110).

National Museum, made in the Laboratory of Mineral Technology: Model of typical gypsum plant, 8 feet by 10 feet (58514); model 16 feet long by 22 inches wide, showing the mining of salt and, as carried on by the Solvay Process Company, Syracuse, its manufacture into sodium compounds (58515).

National Zoological Park: 8 skeletons of birds, consisting of Victoria crowned pigeon, *Goura victoria;* keel-billed toucan, *Ramphastos brevicarinatus;* 2 specimens of crested screamer, *Chauna torquata;* Swainson's hawk, *Buteo swainsoni;* 2 specimens of European flamingo, *Phœnicopterus roseus;* reddish egret, *Dichromanassa rufescens* (57182); Texas lynx (57388); Arabian baboon (57438); galago and a gray coati mundi (57460); serval, dorcas gazelle, wombat, Alaska brown bear and a vicugna (57550); pine marten (57594); tapir (57755); white-fronted parrot, *Amazona albifrons;* curassow, *Crax fasciolata;* cockateel, *Calopsitta novæ hollandiæ* (with body skeleton) (57788); cougar and a brown macaque (57821); muscovy duck, *Cairina moschata;* snow pigeon, *Columba leuconota;* black-backed porphyrio, *Porphyrio melanotus* (57846); macaque and a Patagonian cavy (57863); albino opossum (57945); lion (58017); Florida lynx or wild cat (58051); jaguar and an African palm civet (58073); Florida otter (58162); red-backed hawk, *Buteo erythronotus* (58222); weka rail, *Ocydromus australis* (58340); snake, *Python reticulatus* (58484).

SMOKY HOLLOW COAL COMPANY, Avery, Iowa: Lump of coal (58088).

SNIDER, M. F., Internal Revenue Bureau, Washington, D. C.: 13 brass Internal Revenue tags, used between 1862 and 1867 for marking bales of cotton upon which the tax had been paid (57729).

SOAR, CHARLES HENRY, Balboa Heights, Canal Zone: 3 metal objects—1 of gold and 2 of copper gilt—from Chiriqui, Province of Panama, south of boundary of Costa Rica (58333: purchase).

SOLVAY PROCESS COMPANY, THE, Syracuse, N. Y.: Miscellaneous collection of raw materials and finished products (57872); 8 photographic enlargements of views of salt wells and soda works of the Solvay Process Company (58517).

SORRELLS, C. M., U. S. National Museum: A Colt's revolver, caliber .36 (57855).

SOUTH AFRICAN MUSEUM, Cape Town, Union of South Africa (through Dr. Louis A. Peringuey, director): 2 pieces of meteoric iron, the Bethany (137.9 grams) and the Matatiele (73.7 grams), and 1 piece of meteoric stone, St. Mark's (257.7 grams) (58164: exchange).

SOUTH BEND WATCH COMPANY, South Bend, Ind.: "Chesterfield" watch (58201).

SOUTH DAKOTA, UNIVERSITY OF, Vermillion, S. Dak. (through Prof. W. H. Over): 515 specimens of plants from South Dakota (57510; 57647; 57717; 57985).

SOUTHERLAND, Mrs. MARY RODMAN, Washington, D. C.: Watch movement made by Edouard Perregaux, Locle, Switzerland (57644).

SOWERBY, ARTHUR DEC., Tientsin, China: 99 mammals, 239 birds, 29 reptiles, 48 fishes, a collection of insects, and a crayfish, from Manchuria and northeastern China (57340; 57529; 58121; 58149; 58378). Collected for the Museum.

SPRINGER, Hon. FRANK, East Las Vegas, N. Mex.: 9 crinoids, namely, 2 specimens of *Nemaster iowensis*, cotypes, and 7 specimens of *Coccometra hagenii*, from Florida (58388).

SQUIRES, GRANT, New York City: 6 Chinese postage and 7 postage due stamps (58350: exchange).

STABLER, H. B., Baltimore, Md.: Arctic 3-toed woodpecker, *Picoides arcticus*, from Maine (57601).

STANDARD OIL CLOTH COMPANY, INC., THE, New York City: A series of specimens and photographs illustrating the manufacture and use of oil cloth (57750).

STANDARD SLATE CORPORATION, Esmont, Va.: 6 samples of roofing slate, 8 inches by 8 inches (57178).

STANDLEY, PAUL C., U. S. National Museum: 73 specimens of plants from Loudoun County, Va. (57243; 58401).

STATE, DEPARTMENT OF:

Chinese bamboo oil lamp from the South Fukien Province, with some of the wick and a sample of the grass, collected by Lester Maynard, American consul, Amoy, China (57511).

STEAD, Dr. DAVID G., Royal Commissioner of Fisheries, Sydney, New South Wales: 5 photographs of crustaceans (58030).

STEARNS, Commander C. D., U. S. Navy: 22 specimens of ferns from Samoa (57162); collection of Samoan and Gilbert Island ethnological specimens, including several fine mats (58470: loan).

STEARNS, JOHN N., & Co., New York City: 7 bobbins and 20 skeins of thrown silk; 12 samples of finished dress silks (58394).

STEELE, E. S., U. S. National Museum: 515 specimens of plants from the District of Columbia and vicinity (57791).

STEPHENSON, JOHN W., New York City: Collection of small named samples of upholstery fabrics (58430).

STEPHENSON, Dr. L. W., U. S. Geological Survey, Washington, D. C.: About 500 specimens of Tertiary fossils (57542).

STERRETT, DOUGLAS B., U. S. Geological Survey, Washington, D. C.: Samples of apatite and a specimen of triphylite, from New Hampshire (57483; 57502). Collected for the Museum. (See under Alexander A. Anzell.)

STEWARD, Mr. and Mrs. JOHN, New York City (through Hon. Henry White, Washington, D. C.): A 15th century Flemish tapestry with circular centerpiece representing the departure of the caravels of Columbus from Palos, Spain, bordered by an inscription and ornamental and emblematic designs (58168: loan).

STICHT, ROBERT, Mt. Lyell, Tasmania: A specimen of stichite from near Dundas, Tasmania (57[illegible]).

STOCKHOLM, SWEDEN, NATURHISTORISKA RIKSMUSEUM, ETNOGRAFISKA AFDELNINGEN (through Prof. C. V. Hartman): 166 archeological stone implements from the United States, Alaska, and other localities; also 25 plaster casts of stone implements (57262: exchange).

STOWE, H. E., Washington, D. C.: A Wesson and Harrington revolver (57928).

STURTEVANT, E. D., Hollywood, Cal.: 2 living specimens of Cactaceæ (58277: exchange).

SULZER, CHARLES A., Sulzer, Alaska: Samples of barium sulphate from Lime Point, Sulzer (57199).

SUMNER, Mrs. ELLEN P., Dogue, Va.: Child's white linen pantalettes, of about the middle of the 19th century (58415: loan).

SUPERIOR COAL COMPANY, Glen Campbell, Pa.: A cube of coal (58518).

SUPERIOR THREAD AND YARN COMPANY, New York City: Sample of prepared ramie fiber, "Stycos Wool Substitute" (57996).

SURFACE, HENRY E., Madison, Wis.: 4 photographs of a humpback whale (57714).

SUSQUEHANNA COAL COMPANY, Shamokin, Pa.: Cube of coal from Cameron colliery (57976).

SWIGERT, R. G., Portland, Oreg.: Adult dragonfly, *Æschna californica* (58360).

SYDNEY, NEW SOUTH WALES, AUSTRALIA, BOTANIC GARDENS (through Mr. J. H. Maiden, director): 300 specimens of plants from Australia (57667; 57858; 57983). Exchange.

SYDNEY, NEW SOUTH WALES, AUSTRALIA, DEPARTMENT OF MINES: A 200-gram slice of the Delegate, New South Wales, meteoric iron (57962).

TAFFERTY, J. V., Paracale, Luzon Island, P. I. (through Mr. Horace R. Burritt, Portland, Oreg.): A specimen of native gold with native silver, from Luzon (58376).

TAYLOR, Miss CORNELIA J., and Mrs. WILLIAM MANN RANDOLPH, Charlottesville, Va.: 8 articles of wearing apparel used by Thomas Jefferson, received from two of his descendants (58437: loan).

TAYLOR, Mrs. JULIA ISHAM. (See under Samuel Isham, Estate of.)

TEESDALE, CLYDE H., Forest Service, Madison, Wis.: Specimen of creosoted pine pile infested with crustacean, *Sphæroma quadridentatum;* also a vial containing specimens of *Sphæroma* (57915); 7 specimens of a marine mollusk, *Martesia cuneiformis*, from Pensacola, Fla. (57933).

TEETER, M. W., Warminster, Va.: Specimen of rhinoceros beetle (57143).

TEMPANY, H. A., St. John, Antigua (through Dr. T. Wayland Vaughan): A collection of fossil wood from Antigua (57640).

TEYSSIER, HENRY, Clermont-Ferrand, France: 13 specimens of plants from France (57299).

THOM, CORCORAN, Washington, D. C. (through Dr. Alexander Graham Bell): An aeroplane dart (58375).

THOMPSON, Dr. J. C., U. S. Navy, Sausalito, Cal.: Reptiles from Mexico and California (57198; 57838).

THROPP, JOSEPH E., Earlston, Pa.: 3 samples of coal (57906).

TIDESTROM, IVAR, Bureau of Plant Industry, Washington, D. C.: 334 specimens of plants, mainly from the eastern part of the United States (57242; 57434; 57789; 57857; 57958; 58155).

TIERNEY, LEWIS E., Anacostia, D. C.: Nest of a hymenopteron from near Silver Hill, Md. (58239).

TOEPFER AND SCHROFF, New York City: 3 designs in water colors for printing on silk (57395).

TOLMAN, R. P., U. S. National Museum: 284 specimens illustrating the graphic arts, including magazines, photomechanical reliefs, chromolithographs, collotypes, photomechanical intaglios, engravings, photographs, halftones, etc. (58127).

TOPPING, D. LEROY, Bureau of the Treasury, Manila, P. I.: 50 specimens of ferns from the Philippine Islands (57514); about 2,500 specimens of phanerogams mainly from New York and the vicinity of Washington, D. C. (57621).

TORRE BUENO, J. R. DE LA, White Plains, N. Y.: A small collection of insects (57196).

TOWNSEND, Dr. C. H. T., Bureau of Entomology, Washington, D. C.: A lizard, 9 reptiles, and 6 Diptera (including type and cotypes of *Phlebotomus verruearum*), from Peru (57240; 57276; 57504); 8 Diptera, types of *Anastrepha peruviana* and *Acucuba saltans* (57561); 51 specimens of plants from Peru and New Hampshire (57583); type of dipteran, *Synthesiostrebla amorphochili* (57635); 118 slides of Peruvian muscoid maggots and eggs; 443 vials of complete male and female reproductive systems; 3,000 adult Diptera, mostly Peruvian muscoidea, including types and paratypes of 157 new species, about 400 types of dissections, and 100 European Diptera determined by Bezzi (57897).

TREADWELL, Dr. AARON L., Vassar College, Poughkeepsie, N. Y.: 11 annelids from Dry Tortugas, Fla., consisting of a specimen each of *Leodice longisetis*, *L. mutilata*, and *L. fucata*, 3 of *Marphysa fragilis*, 1 of *Aglaurides diphyllidia*, 2 of *Polynoe granulata*, and 2 of *Hermenia verruculosa* (57875: exchange).

TREASURY DEPARTMENT:

A sample of artificial sperrylite from the San Francisco Mint, received through Mr. Frederic P. Dewey, acting director of the Mint (57831).

TREAT, GEORGE, Valdez, Alaska (through Col. W. P. Richardson, U. S. Army): An oil painting by Sydney M. Laurence, "The Trapper" (58011: loan).

TRENIS, O. J., Washington, D. C.: Skin of a barred owl, *Strix nebulosa*, from Washington (58147).

TRESCOT, Miss SALLIE McC., Pendleton, S. C. (through Mrs. E. W. Trescot, Washington, D. C.): Piece of Chinese embroidery, purchased by Mr. William Henry Trescot (father of Miss Trescot) in the Imperial Palace, Pekin, while he was one of three commissioners on a diplomatic mission to the Chinese Government in 1880 (58460: loan).

TREUIL, Miss EUNICE, Junior, La.: Specimen of orchid, *Epidendrum*, from Louisiana (57279).

TRICE, W. E., Cotton Plant, Ark.: Bannerstone of rose quartz, found on a farm in Woodruff County, Ark. (57949: purchase).

TUCKER, T. S., Mullins, S. C.: Ground dove, *Chæmepelia passerina terrestris*, from South Carolina (57948).

TUCKERMAN, Miss EMILY, Washington, D. C.: Square of purple cut velvet with brocade border, period of Louis XVI, and an embroidered waistcoat (57774: loan).

TUCKERMAN, Miss LAURA WOLCOTT (through Mr. and Mrs. Walter R. Tuckerman, Edgewood, Md.): Silver tea set of 5 pieces, which belonged to Laura Wolcott, daughter of Oliver Wolcott, one of the signers of the Declaration of Independence (57783: loan).

TUCKERMAN, Mrs. WALTER R., Edgewood, Md.: Piece of Rhodian embroidery, piece of Empire tapestry, and a square of Genoese velvet with fringe (58225: loan).

TWEEDLIE, ROBERT, Paraiso, Canal Zone: Collection of fishes, crustaceans and an octopus, from Chame Point, Canal Zone (57273: collected for the Museum).

TYRRELL, J. B., Toronto, Canada: A sample of yukonite (57718).

TYSON, Miss EDNA, Waycross, Ga.: Moth, *Telea polyphemus* (57426).

UNIVERSITETETS BOTANISKE MUSEUM. (See under Copenhagen, Denmark.)

UNIVERSITETETS ZOOLOGISKE MUSEUM. (See under Copenhagen, Denmark.)

URITA, T., Kagoshima, Japan: Collection of Japanese crabs (57770; 57803).

VANDALIA COAL COMPANY, Terre Haute, Ind.: Lump of coal (58084).

VANDERBILT, Mrs. GEORGE W., Washington, D. C.: 3 oil paintings, namely, "Rouvière in the rôle of Hamlet" and "Le Repos," by Edouard Manet, and "Rosita," by Ignacio Zuloaga (57942: loan).

VAN DYKE, Dr. E. C., San Francisco, Cal.: 24 beetles, *Cossonus*, representing 7 species, including paratypes of 5 species recently described by Dr. Van Dyke (58364).

VAN ESELTINE, G. P., U. S. National Museum: 120 specimens of plants from the District of Columbia and vicinity (58206).

VAN SKOIK, WILLIS C., South Granby, N. Y.: Skull found in a gravel bank (58303).

VAUGHAN, Dr. T. WAYLAND, U. S. Geological Survey, Washington, D. C.: 5 echinoids, 3 crabs, and a fish, collected by Mr. E. W. Gudger, Tortugas, Fla. (57822); marine invertebrates, a beetle and 5 quart jars of algæ, from Tortugas (57943). (See under Sir H. Hesketh J. Bell, W. Maxwell Greene, and H. A. Tempany.)

VIENNA, AUSTRIA, K. K. NATURHISTORISCHES HOFMUSEUM (through Dr. F. X. Schaffer): About 5,000 specimens of European Paleozoic and Mesozoic invertebrate fossils (57303: exchange).

VIERECK, HENRY L., State Insectary, Sacramento, Cal.: Land shells from Italy (57526).

WAIT, GUY L., Lewistown, Mont.: Remains of a Mosasaur, consisting of 50 or more vertebræ, skull, lower jaw and portions of paddles (57248: purchase).

WALCOTT, Miss HELEN BREESE, Washington, D. C.: Hat worn by Mrs. Helen B. Sanford, Oneida, N. Y., about 1870 (58347).

WALES, EDWARD, Washington, D. C.: 350 specimens of marine mollusks from various localities (58436).

WALKER, BRYANT, Detroit, Mich.: 2 specimens of mollusk, *Planorbis multivolvis*, from Howe Lake, Mich., received through Mr. John B. Henderson (57454); 7 specimens of mollusk, *Quadrula kieneriana*, from various localities in Georgia (57892).

WALKER, Dr. F. V., Bluffton, S. C.: Fly, *Sciapus* species (57421).

WALLIS, J. D., Winnipeg, Canada: About 65 Microlepidoptera (58199).

WALPOLE BROTHERS, INC., New York City: An Irish handwoven linen damask tablecloth (57649).

WALTER, Mrs. MARY T., Washington, D. C.: 9 specimens of plants from Cayuga County, N. Y. (57450).

WALTON, JESSE S., Pensacola, Fla. (through Mr. R. C. Ballard Thruston, Louisville, Ky.): A powder horn, bullet pouch, measure for powder charge, and dagger with sheath, carried by Capt. William Walton in the War of the Revolution; received from his great-grandson (58220: loan).

WALTON, W. R., Bureau of Entomology, Washington, D. C.: Fly, *Mauromyia pulla*, from Carlisle, Pa. (57186).

WANAMAKER, JOHN, New York City: A collection of samples of novelty cotton dress fabrics produced in 1914 by Rodier, the foremost manufacturer of such fabrics in France (58320).

WANGER, NEWTON, Washington, D. C.: Specimen of the so-called "Ringing-rock" (57944).

WAR DEPARTMENT:

Fragmentary human skulls and bones from a mound in the Shiloh National Military Park, received

WAR DEPARTMENT—Continued.
through Mr. DeLong Rice, secretary and superintendent, Shiloh National Military Park (57449).

Army Medical Museum: 4 aluminum coins, samples of the special coinage used in the Leper Colony on Culion Island, P. I., received by the Army Medical Museum from the Government of the Philippine Islands (57845).

Office of the Chief of Ordnance: U. S. magazine rifle, model of 1903, adapted for use by marksmen in national rifle matches (57516).

WARD, Mrs. MARGARET I., Rushton, Mich.: Egg of a hybrid duck (58226).

WARD'S NATURAL SCIENCE ESTABLISHMENT, Rochester, N. Y.: Skeleton of an aye-aye from Madagascar (58439: purchase).

WARNER, J. C., Miami, Fla.: Bug, *Phymata erosa*, subspecies *fasciata* (57481); larva of a moth of the family Limacodidæ (58066).

WARREN FEATHERBONE COMPANY, THE, Three Oaks, Mich.: 12 specimens illustrating the manufacture of featherbone (57446).

WASHINGTON, C. S., U. S. National Museum: Bat, *Lasionycteris noctivagans*, from Washington, D. C. (57394).

WASHINGTON, Dr. HENRY S., Geophysical Laboratory, Carnegie Institution of Washington, Washington, D. C.: A specimen showing unusual crystals of sulphur, from Cianciana, Girgenti, Sicily (58214).

WASHINGTON SANITARIUM, Takoma Park, D. C.: A static electrical machine (57498).

WATIES, Miss KATE C., Columbia, S. C.: Photograph of Dr. John Bachman, the celebrated naturalist of Charleston, S. C. (57350).

WATKINS, JOHN T., Alexandria, Va.: 2 Costa Rican gold coins, 2 gold ornaments, necklace made of monkeys' teeth, 2 jaguar teeth for personal adornment, a specimen of mastate fiber and a native pack bag made from the same material, collected by the donor in Costa Rica (58335).

WATSON, J. R., Agricultural Experiment Station, University of Florida, Gainesville, Fla.: 6 slides of Thysanoptera, namely, 2 slides (cotypes) of *Heterothrips salicis* var. *æsculi*, 2 slides (type and cotype) of *Euthrips tritici* var. *projectus*, 1 slide (types) of *Cryptothrips pini* and 1 slide of larvæ (57756).

WEATHERBY, C. A., East Hartford, Conn.: 27 specimens of plants from Connecticut (57139).

WEBB, WALTER D., jr., Washington, D. C.: 3 land planarians from the greenhouses of the Department of Agriculture (57147); 10 specimens of mollusks and crustaceans, collected by Mrs. M. I. Sparks at Cardiff, Cal. (57696); 27 isopods from a small pond on low ground below Chain Bridge, D. C. (57938).

WEBSTER, Prof. F. M., Bureau of Entomology, Washington, D. C.: A piece of builders' paper, one side colored blue; probably the material used by hornets in making the blue stripes in the nest which was presented by Mr. A. D. Addison (58343).

WEEKS, WILLIAM H., jr., Brooklyn, N. Y.: 17 species of land and marine shells, mostly from Australia and Tasmania (57555: exchange).

WEEMS, Ensign P. V. H., U. S. Navy: Lizards, insects, crabs, mollusks and a fish, from Panama (57275; 57351; 57368).

WEICKER, HERMAN G., New York City: 6 bookplates (58021: exchange).

WELSH, ROBERT F., Philadelphia, Pa.: Fern, *Dryopteris*, from New Brunswick (57403).

WENZEL, C. A., Leyte, P. I.: 150 specimens of plants from Leyte (57302: purchase).

WESTERMAN-FILER COMPANY, Sharon, Pa.: A lump of coal (57909).

WESTERN AUSTRALIAN MUSEUM AND ART GALLERY. (See under Perth, Western Australia.)

WESTERN COAL AND MINING COMPANY, Lexington, Mo.: A cube of coal (58519).

WETMORE, ALEX., Bureau of Biological Survey, Washington, D. C.: Bird skin from Great Falls, Va. (57159).

WHEALTON, Dr. A. W., Chincoteague Island, Va.: Hybrid goose (57965).

WHEELER, Maj. CHARLES SULLY, Washington, D. C.: Model of a cannon (58410: loan).

WHEELER, F. E., Washington, D. C.: Virginia rail, *Rallus virginianus*, from Benning Marsh, D. C. (57361).

WHEELER, H. E., Arkadelphia, Ark.: 7 specimens of land shells, representing 5 species, from China (57420).

WHERRY, Dr. EDGAR T., U. S. National Museum: 2 specimens of oolite from Bethlehem, Pa. (58265).

WHITE, Dr. DAVID. (See under W. N. Page, J. J. Slaymaker and W. J. Wilson.)

WHITE, Hon. HENRY. (See under Mr. and Mrs. John Steward.)

WHITESELL, Mrs. MARY A., San Diego, Cal.: 2 blue and white double-woven coverlets (58524: purchase).

WIELAND, Dr. G. R., Peabody Museum, Yale University, New Haven, Conn.: One of the original types of the fossil alga, *Cryptozoon bassleri* (57523); 30 dinosaurian skin plates, with some fragments (58312).

WILCOX, Mrs. G. A., Martinez, Cal.: 7 specimens of algæ from California (57802).

WILLIAMS, Mrs. AMBROSE, Washington, D. C.: Adult Cecropia moth and its cocoon, from Washington (58464).

WILLIAMS, GARDNER, Washington, D. C.: 17 bird skins from South Africa (57886).

WILLIAMS, H. J., Holtville, Cal.: A nodule of malachite coated with chrysocolla and chalcedony (58211).

WILLIAMSON, E. B., Bluffton, Ind.: 9 dragonflies, Odonata, of the group Protoneura, representing 7 species (5 of which are represented by paratypes), from British Guiana and Guatemala (57410).

WILLIAMSON, F. P., Zamboanga, P. I.: Beetle, *Chalcosoma atlas* (57419).

WILMS, F., Königl. Botanisches Museum, Dahlem-Steglitz (bei Berlin), Germany: 200 specimens of plants collected in Natal by Rudatis, and 170 collected in Nyassaland by Stolz (57321: purchase).

WILSON, Dr. CHARLES B., State Normal School, Westfield, Mass.: About 175 specimens of parasitic copepods from the donor's private collection (58400).

WILSON, CHARLES E., Mississippi Agricultural and Mechanical College, Agricultural College, Miss.: About 12 earthworms from a well at Agricultural College (57900).

WILSON, E. W., Brookland, D. C.: A series of vanadium minerals from Peru (58172: purchase).

WILSON, FRANK, Salt Lake City, Utah (through Mr. Victor C. Heikes): 2 scheelite crystals from the Wilson Bismuth Mine, Clifton District, Tooele County, Utah (58248).

WILSON, Miss MARY L., Haverhill, Mass.: Fascicles 1 to 6 (150 specimens) of Tuckerman's Lichenes Americae Septentrionalis Exsiccati (58504).

WILSON, Mrs. THOMAS HAMILTON, and Miss ABERCROMBIE, Washington, D. C.: (through Mrs. R. G. Hoes): A pair of gloves embroidered in floss (57234); a white linen mitt of the colonial period; and an infant's shirt of white linen trimmed with lace (58474). Loan.

WILSON, W. J., Geological Survey of Canada, Ottawa, Canada (through Dr. David White): 3 specimens of the fossil plant *Whittleseya desiderata*, from Nova Scotia (57768).

WINKLEY, Rev. HENRY W., Danvers, Mass.: Sediment from Beaver Brook, Danvers (57378); 25 specimens of mollusk, *Acmæa testudinalis*, from Eastport, Me. (57472).

WINLOCK, H. E., Metropolitan Museum of Art, New York City: A collection of ancient Egyptian human bones and domestic sheep and ox bones, and some specimens of modern native Egyptian clothing (57418).

WOLDEN, B. O., Wallingford, Iowa: 3 specimens of grass, *Panicum*, from Iowa (57166; 57435).

WOLF TONGUE MINING COMPANY, THE, Boulder, Colo. (through Mr. Frank L. Hess): 2 specimens of tungsten ore (57202).

WOOD, HORACE N. E., Washington, D. C.: 10 specimens of crustacean, *Eucangonyx gracilia*, collected from a small pond on low ground below Chain Bridge, D. C. (57939).

WOOD-JONES, Dr. F., London, England: About 106 specimens of corals representing about 50 species, and 21 specimens of calcareous algæ, millepora, and lithologic specimens from Cocos Islands, Indian Ocean (58454).

WOOLDRIDGE, EDGAR, Lakeport, Cal.: 16 flint scrapers from village sites at Lakeport (57844).

WOOLLEY, CLAUDE L., Baltimore, Md.: An aluminum sundial adapted to the latitude of Valencia, Spain (57381).

WOOLLEY, J., COAL COMPANY, Evansville, Ind.: A lump of coal (57911).

WORCESTER WOOLEN MILL COMPANY, THE, Worcester, Mass.: A series of 9 specimens illustrating the processes used in the manufacture of woolen cloth (57348).

WORCH, HUGO, Washington, D. C.: A collection of pianos of great historical importance (The Hugo Worch Collection), showing every phase of the American pianoforte industry prior to 1850 (58488).

WREN, CHRISTOPHER, Plymouth, Pa.: Collection of Iroquois pottery fragments (91 specimens) from the Susquehanna River Valley (57429).

WRIGHT, Dr. F. E., Geophysical Laboratory, Carnegie Institution of Washington, Washington, D. C.: Specimens of obsidian from Iceland, illustrating a paper on the origin of spherulitic structure (58191).

WRIGHT, W. S., San Diego, Cal.: 26 specimens of beetle, *Eleodes neotomæ* (57408).

WURZLOW, E. C., Houma, La.: 7 insects, 4 plants and a lizard, from Louisiana (57155; 57300; 58054; 58210; 58295).

WYNN, HARRY, U. S. National Museum: Remington revolver (57485); Joslyn breech-loading carbine (58348). Loan.

YALE PERUVIAN EXPEDITION OF 1914, 1915 (under the auspices of Yale University and the National Geographic Society, Dr. Hiram Bingham, director): 7 specimens of Cactaceae, including 5 living specimens, collected in Peru by Mr. E. C. Erdis (57970); 5 specimens of Cactaceae, 3 of which are living, collected in Bolivia by Mr. Erdis (58183).

YOUNG, JAMES HAY, Meredith, Victoria, Australia: An Australian aboriginal green stone ax from Glen Forbes on the Bass River, South Gippsland, and 11 stone flakes from Meredith District, Australia, collected by the donor (58496).

YOUNG, Dr. J. LOWE, New York City: A set of plaster casts (upper and lower jaws), showing lower first molars with 6 distinct cusps (58406).

ZABEL, JOHN H. (See under William H. Forwood.)

ZETEK, JAMES, Ancon, Canal Zone: Birds, reptiles, batrachians, fishes, mollusks, insects, and invertebrates (57569); fragmentary bones of sloth, *Megatherium* (58494); echinoderm, a small spider crab carrying a sponge, and 40 species (about 130 specimens) of mollusks (58534).

ZIMMERMAN, MARK E., White Cloud, Kans.: 56 fragments of aboriginal pottery (57585).

LIST OF PUBLICATIONS OF THE U. S. NATIONAL MUSEUM ISSUED DURING THE FISCAL YEAR 1914–1915, AND OF PAPERS PUBLISHED ELSEWHERE WHICH RELATE TO THE COLLECTIONS.

PUBLICATIONS OF THE MUSEUM.

ANNUAL REPORT.

Smithsonian Institution | United States National Museum | — | Report on the progress and condition of the United States National Museum for the year ending June 30, 1914 | (Seal) | Washington | Government Printing Office | 1915

8vo., pp. 1–252.

PROCEEDINGS.

Smithsonian Institution | United States National Museum | — | Proceedings of the United States National Museum | — | Volume 47 | — | (Seal) | Washington | Government Printing Office | 1915

8vo., pp. i–xii, 1–755, pls. 1–56.

BULLETINS.

Smithsonian Institution | United States National Museum | Bulletin 71 | — | A monograph of the Foraminifera of the North Pacific Ocean | — | Part V. Rotaliidæ | — | By | Joseph Augustine Cushman | Of the Boston Society of Natural History | (Seal) | Washington | Government Printing Office | 1915

8vo., pp. i–vii, 1–87, pls. 1–31, figs. 1–62.

Smithsonian Institution | United States National Museum | Bulletin 82 | — | A monograph of the existing crinoids | By | Austin Hobart Clark | Assistant Curator, Division of Marine Invertebrates | United States National Museum | — | Volume 1 | The Comatulids | — | Part 1 | (Seal) | Washington | Government Printing Office | 1915

4to., pp. i–vi, 1–406, pls. 1–17, figs. 1–513.

Smithsonian Institution | United States National Museum | Bulletin 88 | — | Revision of Paleozoic Stelleroidea | with special reference to North | American Asteroidea | By | Charles Schuchert | Professor of Paleontology, Yale University | New Haven | (Seal) | Washington | Government Printing Office | 1915

8vo., pp. 1–311, pls. 1–38, figs. 1–41.

Smithsonian Institution | United States National Museum | Bulletin 89 | — | Osteology of the armored dinosauria in the | United States National Museum, with | special reference to the genus | Stegosaurus | By | Charles Whitney Gilmore | Assistant Curator of Fossil Reptiles, United States National Museum | (Seal) | Washington | Government Printing Office | 1914

4to., pp. i–xi, 1–143, pls. 1–37, figs. 1–73.

Smithsonian Institution | United States National Museum | Bulletin 90 | — | A monograph of the molluscan fauna of | the Orthaulax Pugnax Zone of the | Oligocene of Tampa, Florida | By | William Healey Dall | Curator, Division of Mollusks, United States National Museum | (Seal) | Washington | Government Printing Office | 1915

8vo., pp. i–xv, 1–173, pls. 1–26.

Smithsonian Institution.|United States National Museum. | — | Special Bulletin. | — | American hydroids. | — | Part III. | The Campanulariдæ and the | Bonneviellidæ, | with twenty-seven plates. | By | Charles Cleveland Nutting, | Professor of Zoology, State University of Iowa. | — | Washington: | Government Printing Office. | 1915

4to., pp. i–iii, 1–126, pls. 1–27, figs. 1–70.

Smithsonian Institution | United States National Museum | — | Contributions | from the | United States National Herbarium | Volume 19 | — | Flora of New Mexico | — | By E. O. Wooton and Paul C. Standley | (Seal) | Washington | Government Printing Office | 1915

8vo., pp. 1–794.

PAPERS PUBLISHED IN SEPARATE FORM.

FROM VOLUME 47 OF THE PROCEEDINGS.

No. 2052. Results of the Yale-Peruvian Expedition of 1911. Addendum to the Hymenoptera Ichneumonoidea. By P. R. Myers. pp. 361, 362.

No. 2053. A new pearly freshwater mussel of the genus Hyria from Brazil. By L. S. Frierson. p. 363, pl. 12.

No. 2054. Descriptions of new species and genera of Lepidoptera from Mexico. By Harrison G. Dyar. pp. 365–409.

No. 2055. Littoral marine mollusks of Chincoteague Island, Virginia. By John B. Henderson and Paul Bartsch. pp. 411–421, pls. 13, 14.

No. 2056. Lepidoptera of the Yale-Dominican Expedition of 1913. By Harrison G. Dyar. pp. 423–426.

No. 2057. A systematic account of the grasshopper mice. By N. Hollister. pp. 427–489, pl. 15, figs. 1–3.

No. 2058. Orthoptera of the Yale-Dominican Expedition of 1913. By A. N. Caudell. pp. 491–495.

No. 2059. A peculiarity in the growth of the tail feathers of the giant hornbill (Rhinoplax Vigil). By Alex Wetmore. pp. 497–500.

No. 2060. Notes on wolframite, beraunite, and axinite. By Edgar T. Wherry. pp. 501–511.

No. 2061. Vespoid and sphecoid Hymenoptera collected in Guatemala by W. P. Cockerell. By S. A. Rohwer. pp. 513–523.

No. 2062. Report on Rotatoria from Panama with descriptions of new species. By Harry K. Harring. pp. 525–564, pls. 16–24.

No. 2063. North American parasitic copepods belonging to the Lernæopodidæ, with a revision of the entire family. By Charles Branch Wilson. pp. 565–729, pls. 25–56, figs. 1–15.

FROM VOLUME 48 OF THE PROCEEDINGS.

No. 2064. New North American bees of the genus Andrena. By Henry L. Viereck and T. D. A. Cockerell. pp. 1–58.

No. 2065. The Crustacea Euphausiacea of the United States National Museum. By H. J. Hansen. pp. 59–114, pls. 1–4.

No. 2066. List of generic names and their type-species in the Coleopterous super family Scolytoidea. By A. D. Hopkins. pp. 115–136.

No. 2067. A new genus and some new species of crabs of the family Goneplacidæ. [Scientific results of the Philippine cruise of the Fisheries steamer "Albatross," 1907–1910. — No. 32.] By Mary J. Rathbun. pp. 137–154.

No. 2068. Descriptions of new genera and species, with notes on parasitic Hymenoptera. By A. B. Gahan. pp. 155–168.

No. 2069. Two new South American jaguars. By N. Hollister. pp. 169, 170, pl. 5.

No. 2070. Report on some parasitic and predaceous Diptera from northeastern New Mexico. By W. R. Walton. pp. 171–186, pls. 6, 7.

No. 2071. Descriptions of a new genus and species of the discodrilid worms. By Maurice C. Hall. pp. 187–193, figs. 1–3.

No. 2072. New genera and species of gall midges. By E. Porter Felt. pp. 195–211, figs. 1–15.

No. 2073. Report on the holothurians collected by the United States Fisheries steamer "Albatross" in the northwestern Pacific during the summer of 1906. By Hiroshi Ohshima. pp. 213–291, pls. 8–11, fig. 1.

No. 2074. The Mississippi River bluffs at Columbus and Hickman, Kentucky, and their fossil flora. By Edward W. Berry. pp. 293–303, pls. 12, 13.

No. 2075. Fishes collected by the United States Fisheries steamer "Albatross" in southern California in 1904. By Charles Henry Gilbert. pp. 305–380, pls. 14–22.

No. 2076. Descriptions of new African birds of the genera Francolinus, Chalcopelia, Cinnyris, Chalcomitra, Anthreptes, Estrilda, Halcyon, Melittophagus, and Colius. By Edgar A. Mearns. pp. 381–394.

No. 2077. An extinct marsupial from the Fort Union with notes on the Myrmecobidæ and other families of this group. By James Williams Gidley. pp. 395–402, pl. 23.

No. 2078. Reptiles of northwestern Nevada and adjacent territory. By C. H. Richardson. pp. 403–435.

No. 2079. On some generic names first mentioned in the "Conchological Illustrations." By William Healey Dall. pp. 437–440.

No. 2080. Description of new species of crane-flies from Central America. By Charles P. Alexander. pp. 441–444, pl. 24.

No. 2081. Synopsis of the species of sawflies belonging to the genus Dimorphopteryx. By S. A. Rohwer. pp. 445–448.

No. 2082. Flounders and soles from Japan collected by the United States Bureau of Fisheries steamer "Albatross" in 1906. By Carl L. Hubbs. pp. 449–496, pls. 25–27.

No. 2083. Notes on some sawfly larvae belonging to the genus Dimorphopteryx. By William Middleton. pp. 497–501, pl. 28, figs. 1–4.

No. 2084. The Fisher, Polk County, Minnesota, meteorite. By George P. Merrill. pp. 503–506, pl. 29.

No. 2085. Descriptions of six new species of Ichneumon-flies. By R. A. Cushman. pp. 507–513.

No. 2086. Contributions to the knowledge of the mammals of the Pleistocene of North America. By Oliver P. Hay. pp. 515–575, pls. 30–37, figs. 1–5.

No. 2087. Descriptions of new Hymenoptera, No. 9. By J. C. Crawford. pp. 577–586, figs. 1–11.

No. 2088. A synopsis of the races of the long-tailed goatsucker, Caprimulgus macrurus Horsfield. By Harry C. Oberholser. pp. 587–599.

No. 2089. Notes on neotropical dragonflies, or Odonata. By Edward Bruce Williamson. pp. 601–638, pls. 38–44, figs. *a–c*.

No. 2090. A review of the subspecies of the ruddy kingfisher, Entomothera coromanda (Linnæus). By Harry C. Oberholser. pp. 639–657.

No. 2091. Rediscovery of Pourtales' Haliotis. By John B. Henderson. pp. 659–661, pls. 45, 46.

FROM VOLUME 49 OF THE PROCEEDINGS.

No. 2093. Notes on some United States grasshoppers of the family Acrididæ. By A. N. Caudell. pp. 25–31.

CLASSIFIED LIST OF PAPERS BASED WHOLLY OR IN PART ON THE NATIONAL COLLECTIONS.[1]

MUSEUM ADMINISTRATION.

RATHBUN, RICHARD. Report on the progress and condition of the United States National Museum for the year ending June 30, 1914.

Amer. Anthropologist (n. s.), 16, No. 2, Apr.–June, 1914, pp. 200–220, pls. 14–19, figs. 64–73.

The author describes a number of prehistoric objects excavated by him from a shell-heap at Erin Bay, Island of Trinidad. The kitchen midden in which they were obtained is historically interesting from the fact that it is situated not far from the spring where the sailors of Columbus filled their casks with water on his third voyage.

RATHBUN, RICHARD—Continued.

8vo., pp. 1–252, Jan. 19, 1915.

ANTHROPOLOGY.

FEWKES, J. WALTER. Prehistoric objects from a shell-heap at Erin Bay, Trinidad.

FEWKES, J. WALTER—Continued.

[1] A few papers published prior to this fiscal year are included, having been inadvertently omitted from previous reports.

FEWKES, J. WALTER. A prehistoric stone collar from Porto Rico.

Amer. Anthropologist (n. s.), 16, No. 2, Apr.–June, 1914, pp. 319–330, figs. 97–109.

Description of a prehistoric Porto Rican stone collar the knob of which is modified into the head of a reptile.

——— Archeology of the Lower Mimbres Valley, New Mexico.

Smithsonian Misc. Colls., 63, No. 10, 1914, pp. 1–53, pls. 1–8, figs. 1–32.

Preliminary report on the antiquities of the Mimbres Valley, New Mexico. The evidence thus far gathered indicates that the culture of the prehistoric inhabitants of the Mimbres Valley was a connecting link between that of the pueblos in the north and of the people who built the Casa Grandes in Chihuahua in the south. It is closely allied, however, to a form of culture known as the "pre-puebloan," which preceded the true pueblo culture characteristic of New Mexico.

——— Archaeology of Barbados.

Proc. Nat. Acad. Sci., 1, No. 1, Jan., 1915, pp. 47–51.

A brief preliminary account of the various mounds, caves, shell-heaps and other aboriginal sites found in the island of Barbados.

——— Engraved celts from the Antilles.

Contr. Heye Museum, 2, No. 3, May, 1915, pp. 1–12, figs. 1–4.

Discusses certain Antillean celts with engraved figures on one surface from the Heye Museum, the Museum für Völkerkunde in Berlin, Germany, and the Royal Museum in Copenhagen, Denmark.

——— Prehistoric cultural centers in the West Indies.

Journ. Washington Acad. Sci., 5, No. 12, June 19, 1915, pp. 436–443.

FEWKES, J. WALTER—Continued.

This article divides the prehistoric culture of the West Indies into a certain number of centers, distinguished from each other by the character of such artifacts as stone implements and pottery, and is preliminary to a more extensive discussion of the subject which will later be published by the Bureau of American Ethnology, the work having been done under a plan of cooperation between the Museum and the Bureau.

HOLMES, W. H. Areas of American culture characterization tentatively outlined as an aid in the study of the antiquities.

Amer. Anthropologist (n. s.), 16, No. 3, July – Sept., 1914, pp. 413–446, pl. 32.

Outlines the areas of the numerous distinctive culture groups of aboriginal America, for convenience in conducting comparative studies of prehistoric remains.

——— Masterpieces of aboriginal American art: I. Stucco-work.

Art and Arch., 1, No. 1, July, 1914, pp. 1–12, pl. 1, figs. 1–10.

The first of a series of brief papers intended to convey an impression of the achievements of the American aborigines in the several arts in which the esthetic sense is especially involved, and at the same time to add to the sum of knowledge of the evolution of the esthetic side of human culture in general. The intelligent use of stucco in architectural embellishment may well be regarded as representing the highest art plane reached on the American continent, and the best examples existing today, some of which have withstood the destructive agencies of a tropical climate for 400 years or more, are described and illustrated.

——— Masterpieces of aboriginal American art: II. Mosaic work, minor, examples.

Art and Arch., 1, No. 3, Nov., 1914, pp. 91–102, 1 pl., figs. 1–9.

HOLMES, W. H.—Continued.

The art of inlay practiced with marvelous perfection by the early Mediterranean nations had reached a high place in the favor of the leading American peoples, and the Aztecs especially had produced works, mostly of minor subjects, in which are displayed a skill and taste truly surprising. The examples illustrated, and more especially the human skull incrusted with brilliant stones, and reproduced in color in the frontispiece, are distinctly impressive.

——— Masterpieces of aboriginal American art: III. Mosaic work, major examples.

Art and Arch., 1, No. 6, May, 1915, pp. 243–255, pls. 1–5, figs. 1–8.

The native Americans were not only competent workers in stucco and the minor forms of mosaic, but applied the latter art with striking effect to the embellishment of their great buildings. The awakening of esthetic appreciation is manifest everywhere among the more advanced tribes, and excellent examples are available in Mexico and Central and South America, those of the ancient cities of Mitla and Uxmal being especially noteworthy.

HRDLIČKA, ALEŠ. A study of old Americans.

Journ. Heredity, 5, No. 11, Nov., 1914, p. 509.

A brief explanation of investigations carried on by the author for a period of more than two years on representatives of the oldest American families.

——— Physical anthropology in America.

Amer. Anthropologist (n. s.), 16, No. 4, Oct.–Dec., 1914, pp. 508–554.

Gives a succinct, but, as far as possible, a complete history of researches in physical anthropology in America, more particularly in the United States, with bibliography. It includes the work of living as well as deceased authors. Discussion of the more recent phases of the subject is reserved for a future communication.

HRDLIČKA, ALEŠ—Continued.

——— The most ancient skeletal remains of man.

Rep. Smithsonian Inst., 1913 (1914), pp. 491–552, pls. 1–41, figs. 1–12.

Report on the precious skeletal material relating to early man in the Old World. Under a grant of the Smithsonian Institution, the author, in 1912, visited the various European institutions in which well authenticated ancient skeletal remains of man are preserved, as well as a number of the more important localities from which these specimens came, and this report embodies the main literature of the subject and abstracts of published data as well as his personal observations. The specimens reported on in particular are those of the Pithecanthropus, Eoanthropus, the Mauer jaw, the Gibraltar skull, the Neanderthal skull and other bones, the Spy skeleton, the Krapina remains, the Jersey (England) teeth, the La Quina skeleton, and the Moustier skeleton.

——— The peopling of America.

Journ. Heredity, 6, No. 2, Feb., 1915, pp. 79–91, figs. 14–21.

A reprint, in the main, of the author's article on the same subject published in the Proceedings of the 18th International Congress of Americanists (1913–1914), with several new illustrations. It was prepared for publication by the editor of the Journal.

——— Some recent anthropological explorations.

Proc. Nat. Acad. Sci., 1, No. 4, Apr., 1915, pp. 235–238.

A brief report of the various anthropological expeditions sent out between 1912 and 1915, under the auspices of the Smithsonian Institution and under the author's direction, in connection with the prepara-

HRDLIČKA, ALEŠ—Continued.

tion of the exhibits of physical anthropology for the Panama-California Exposition, San Diego, California.

JUDD, NEIL M. The use of glue molds in reproducing aboriginal monuments at Quirigua, Guatemala.

Amer. Anthropologist (n. s.), 17, No. 1, Jan.–Mar., 1915, pp. 128–138, pls. 12, 13, figs. 29–34.

Brief account of the successful use of a new medium in reproducing the huge stone stelae and the lesser monuments at the ancient Mayan city of Quirigua. The chief difficulties met with and the manner in which they were finally overcome is also considered.

——— Making glue molds in the Tropics.

The Concrete Age, 21, No. 4, Jan., 1915, pp. 9–11 and 24, 5 illustrations.

The Cement Era, 13, No. 1, Jan., 1915, pp. 54, 55, 3 illustrations.

The employment of glue as a medium in the reproduction of large carvings had not previously been attempted in the Torrid Zone. This article summarizes, for the benefit of those

JUDD, NEIL M.—Continued.

who make frequent use of glue molds, the chief difficulties encountered in the Tropics and the manner in which the expedition's results were finally obtained.

——— Interesting experiments with glue molds in reproducing prehistoric monuments.

The Architect and Engineer of California, 40, No. 2, Feb., 1915, pp. 92–96.

Same as the above, with modifications.

——— The use of glue molds under serious difficulties.

Concrete-Cement Age, 6, No. 3, Mar., 1915, pp. 151–154, figs. 1–6.

Same as the above, with modifications.

SHUFELDT, R. W. Comparative studies of certain cranial sutures in the primates.

Anat. Rec., 9, No. 1, Jan. 20, 1915, pp. 121–124.

Relates to certain characters of human crania in the Division of Physical Anthropology, U. S. National Museum, and their analogues in mammalian crania.

PHILATELY.

LEAVY, JOSEPH B. The United States Government collection of postage stamps.

The Philat. Gaz., 4, No. 12, Dec., 1914, pp. 217–222, 2 pls.; 5, No. 1, Jan., 1915, pp. 1–4; 5, No. 2, Feb., 1915, pp. 21–24; 5, No. 3, Mar., 1915, pp. 41–45; 5, No. 4, Apr., 1915, pp. 69–71; 5, No. 5, May, 1915, pp. 93, 94.

A complete and detailed list of the stamps of the United States and possessions on exhibition in the U. S. National Museum collection, which is to be continued throughout the com-

LEAVY, JOSEPH B.—Continued.

ing year, taking up the stamps of the various foreign countries in the order of installation.

——— Another interesting discovery.

The Philat. Gaz., 5, No. 3, Mar., 1915, pp. 46, 47, 3 figs.

Describes the discovery by Mr. Leavy of two varieties of the United States one dollar stamp of 1894 and 1895, and indicates in detail the differences between the varieties in question. These two varieties are to be made standard by being listed in the forthcoming catalogue of the Scott Stamp & Coin Co.

LEAVY, JOSEPH B. Special printing of die proofs for the San Francisco exposition.

The Philat. Gaz., 5, No. 6, June, 1915, pp. 117–125.

This article, while really a continuation of the paper on "The United States Government collection of postage stamps," was given a special heading as it contains very interesting historical data concerning the character of the dies from which the proofs were made, the information being secured from the Bureau of Engraving and Printing and here made public for the first time.

LEAVY, JOSEPH B. New issue notes.

The Philat. Gaz., 5, No. 2, Feb., 1915, p. 31; 5, No. 3, Mar., 1915, pp. 47, 48; 5, No. 4, Apr., 1915, pp. 79, 80; 5, No. 6, June, 1915, pp. 128–130.

A series of notes on new issues of foreign stamps received from the Universal Postal Union at Berne, Switzerland, through the Post Office Department. They are based entirely on material in the U. S. National Museum.

MAMMALS.

ALLEN, J. A. New South American bats and a new octodont.

Bull. Amer. Mus. Nat. Hist., 33, Art. 29, July 9, 1914, pp. 381–389, pl. 28.

The U. S. National Museum collections were consulted by the author during the preparation of this paper.

——— Review of the South American Sciuridæ.

Bull. Amer. Mus. Nat. Hist., 34, Art. 8, May 17, 1915, pp. 147–309, pls. 1–14, figs. 1–25.

The entire collection of South American squirrels belonging to the U. S. National Museum was lent the author during his work on this paper.

BAILEY, VERNON. Eleven new species and subspecies of pocket gophers of the genus Thomomys.

Proc. Biol. Soc. Washington, 27, July 10, 1914, pp. 115–118.

Describes as new: *Thomomys talpoides bullatus, T. t. caryi, T. t. nebulosus, T. pryori, T. bottæ minor, T. neglectus, T. mearnsi, T. fuscus columbianus, T. f. saturatus, T. f. loringi, T. nevadensis atrogriscus.* The type specimens are in the Biological Survey collection.

COCKERELL, T. D. A., LEWIS I. MILLER and MORRIS PRINTZ. The auditory ossicles of American rodents.

Bull. Amer. Mus. Nat. Hist., 33, Art. 28, July 14, 1914, pp. 347–380, figs. 1–55; 61–124.

Skulls of rodents from the U. S. National Museum collection were lent to the authors for study in connection with the preparation of this paper.

GOLDMAN, E. A. A new spider monkey from Panama.

Proc. Biol. Soc. Washington, 28, Apr. 13, 1915, pp. 101, 102.

Ateles dariensis is described as new. The type is in the Biological Survey collection.

——— Five new rice rats of the genus Oryzomys from Middle America.

Proc. Biol. Soc. Washington, 28, June 29, 1915, pp. 127–130.

Describes as new: *Oryzomys guerrerensis, O. nitidus alleni, O. alfaroi dariensis, O. couesi regillus, O. fulvescens lenis.* Most of the types are in the Biological Survey collection.

——— Five new mammals from Mexico and Arizona.

Proc. Biol. Soc. Washington, 28, June 29, 1915, pp. 133–138.

Describes as new: *Potos flavus guerrerensis, Geomys*

GOLDMAN, E. A.—Continued.

personatus tropicalis, Neotoma albigula mearnsi, N. a. sheldoni, Noctilio leporinus mexicanus. The types are in the Biological Survey collection.

GRINNELL, HILDA WOOD. Three new races of vespertilionid bats from California.

Univ. Calif. Pub. Zool., 12, No. 10, Dec. 4, 1914, pp. 317–320.

Describes as new: *Myotis californicus quercinus, M. yumenensis sociabilis, Corynorhinus macrotis intermedius.* Material for comparison was lent to the author by the U. S. National Museum.

GRINNELL, JOSEPH. Eutamias sonomae, a new chipmunk from the inner northern coast belt of California.

Univ. Calif. Pub. Zool., 12, No. 11, Jan. 20, 1915, pp. 321–325, 1 fig.

U. S. National Museum material was lent to the author for study in connection with the preparation of this paper.

HOLLISTER, N. Descriptions of four new mammals from tropical America.

Proc. Biol. Soc. Washington, 27, July 10, 1914, pp. 141–144.

Describes *Ateles tricolor, Procyon lotor crassidens, Mustela meridana,* and *Loncheres flavidus.*

——— [Review of Theodore Roosevelt and Edmund Heller's "Life-Histories of African Game Animals."]

Die Naturwissenschaften, Berlin, Heft 29, July 17, 1914, pp. 719, 720.

——— [Review of Roy C. Andrews' "Monographs of the Pacific Cetacea, I, The California Gray Whale."]

Die Naturwissenschaften, Berlin, Heft 29, July 17, 1914, p. 720.

——— [Review of Joseph Grinnell's "An account of the mammals and birds of the lower Colorado Valley, etc."]

Die Naturwissenschaften, Berlin, Heft 29, July 17, 1914, p. 721.

HOLLISTER, N. A systematic account of the grasshopper mice.

Proc. U. S. Nat. Mus., 47, No. 2057, Oct. 29, 1914, pp. 427–489, pl. 15.

A monographic revision of the forms of the genus *Onychomys.* One subspecies, *Onychomys torridus surrufus,* is described as new.

——— New mammals from Costa Rica and Mexico.

Proc. Biol. Soc. Washington, 27, Oct. 31, 1914, pp. 209, 210.

New forms are *Mazama tema cerasina* and *Cyclopes mexicanus.*

——— The systematic name of the Brazilian crab-eating raccoon.

Proc. Biol. Soc. Washington, 27, Oct. 31, 1914, p. 215.

Procyon nigripes Mivart antedates *Procyon cancrivorus brasiliensis* Von Ihering.

——— The technical names of the common skunk and mink of the Eastern States.

Proc. Biol. Soc. Washington, 27, Oct. 31, 1914, p. 215.

Mephitis nigra and *Mustela vison mink,* dating from Peale and Beauvois, 1796, antedate *Mephitis putida* and *Mustela vison lutreocephala* as names for the common eastern skunk and mink.

——— On the systematic names of the cheetahs.

Proc. Biol. Soc. Washington, 27, Oct. 31, 1914, p. 216.

——— The spotted tiger-cat in Texas.

Proc. Biol. Soc. Washington, 27, Oct. 31, 1914, p. 219.

A record for *Felis glaucula* north of the Rio Grande.

——— Two new South American jaguars.

Proc. U. S. Nat. Mus., 48, No. 2069, Dec. 16, 1914, pp. 169, 170, pl. 5.

Describes *Felis paraguensis* and *Felis notialis* from Paraguay and Argentina.

HOLLISTER, N. The type locality of Pecari tajacu.

Proc. Biol. Soc. Washington, 28, Mar. 12, 1915, p. 70.

——— A new name for the white-tailed jack rabbit.

Proc. Biol. Soc. Washington, 28, Mar. 12, 1915, p. 70.

Lepus campanius proposed for *Lepus campestris* Bachman, preoccupied.

——— The systematic name of the Mexican spider monkey.

Proc. Biol. Soc. Washington, 28, June 29, 1915, p. 142.

The name *Atcles neglectus* Reinhardt, 1872, is revived.

HOWELL, ARTHUR H. Revision of the American marmots.

North Amer. Fauna, No. 37, Apr. 7, 1915, pp. 1–80, pls. 1–15, figs. 1–3.

Based chiefly on the collections in the U. S. National Museum. Two new forms are described as follows: *Marmota monax petrensis, Marmota flaviventris sierræ.*

——— Descriptions of a new genus and seven new races of flying squirrels.

Proc. Biol. Soc. Washington, 28, May 27, 1915, pp. 109–114.

New: *Eoglaucomys, Glaucomys volans saturatus, G. v. texensis, G. sabrinus canescens, G. s. columbiensis, G. s. latipes, G. s. flaviventris, G. bullatus.* Most of the types are in the U. S. National Museum collection.

MERRIAM, C. HART. Descriptions of thirty apparently new grizzly and brown bears from North America.

Proc. Biol. Soc. Washington, 27, Aug. 13, 1914, pp. 173–196.

New Species: *Ursus alexandrae, U. eltonclarki, U. orgilos, U. innuitus, U. internationalis, U. russelli, U. stikeenensis, U. nortoni, U. imperator, U. absarokus, U. tahltanicus, U. toklat, U. phœonyx latifrons, U. shoshone, U. s. canadensis,*

MERRIAM, C. HART—Continued.

U. klamathensis, U. pervagor, U. caurinus, U. colusus, U. californicus tularensis, U. magister, U. henshawi, U. nelsoni, U. horriæus texensis, U. navaho, U. bairdi, U. utahensis, U. kennerleyi, U. shirasi, U. kidderi tundrensis. Most of the types are in the collections of the Biological Survey and U. S. National Museum.

MILLER, GERRIT S., jr. Directions for preparing specimens of mammals.

Bull. U. S. Nat. Mus., No. 39, Pt. N, 4th ed., rev., Aug. 18, 1914, pp. 1–24, figs. 1–7.

——— Two new North American bats.

Proc. Biol. Soc. Washington, 27, Oct. 31, 1914, pp. 211, 212.

Describes as new: *Myotis longicrus interior, M. l. amotus.* The types are in the Biological Survey collection.

——— The generic name of the collared peccaries.

Proc. Biol. Soc. Washington, 27, Oct. 31, 1914, p. 215.

——— The generic name of the common flying-squirrels.

Proc. Biol. Soc. Washington, 27, Oct. 31, 1914, p. 216.

——— A new bat from Cuba.

Proc. Biol. Soc. Washington, 27, Dec. 29, 1914, pp. 225, 226.

Describes as new: *Chilonatalus macer.* The type is in the U. S. National Museum collection.

——— Further note on the generic name of the collared peccaries.

Proc. Biol. Soc. Washington, 27, Dec. 29, 1914, p. 229.

——— A new squirrel from northeastern China.

Proc. Biol. Soc. Washington, 28, May 27, 1915, pp. 115, 116.

Describes as new: *Tamiops vestitus.* The type is in the U. S. National Museum collection.

MILLER, LEWIS I. (See under T. D. A. Cockerell.)

OSGOOD, WILFRED H., EDWARD A. PREBLE and GEORGE H. PARKER. The fur seals and other life of the Pribilof Islands, Alaska, in 1914.

Bull. Bur. Fisheries, 34, No. 820, June 19, 1915, pp. 1–172, pls. 1–18, maps 1–24.

The fur seal skulls in the U. S. National Museum collection were used in the preparation of this paper.

PARKER, GEORGE H. (See under Wilfred H. Osgood.)

PREBLE, EDWARD A. (See under Wilfred H. Osgood.)

PRINTZ, MORRIS. (See under T. D. A. Cockerell.)

SHUFELDT, R. W. On the osteology of the genera Lasiopyga and Callithrix with notes upon the osteology of the genera Seniocebus and Aotus.

Annals Carnegie Mus., 9, Aug. 17, 1914, pp. 58–85, pls. 12–21.

Skeletons in the U. S. National Museum were studied and figured by the author.

——— On the taxonomy of the Procyonidæ.

Science (n. s.), 41, No. 1062, May 7, 1915, pp. 691, 692.

Skeletons in the U. S. National Museum were studied by the author.

STEJNEGER, LEONHARD. The systematic name of the Pacific walrus.

Proc. Biol. Soc. Washington, 27, July 10, 1914, p. 145.

Odobenus divergens (Illiger) shown to be the proper name for the Pacific walrus.

BIRDS.

BARTSCH, PAUL. Birds observed on the Florida Keys from April 20 to April 30, 1914.

Carnegie Inst. of Washington, Year Book No. 13, 1915, pp. 192–196.

Extracts from journal, recording birds seen, with annotations.

CHAPMAN, FRANK M. Diagnoses of apparently new Colombian birds. III.

Bull. Amer. Mus. Nat. Hist., 33, Art. 40, Nov. 21, 1914, pp. 603–637, pl. 13 (map of s. w. Colombia).

The following forms are described as new: *Streptoprocne zonaris altissima, Trogonurus curucui cupreicauda, Chrysotrogon caligatus columbianus, Eubucco bourcieri occidentalis, E. b. orientalis, Chrysoptilus punctigula striatigularis, Veniliornis oleaginus aureus, Thamnistes anabatinus intermedius, Myrmopagis schisticolor interior, Microrhopias grisea hondæ, Hylopezus dives barbacoæ, Synallaxis azaræ media, S. mœsta obscura, S. gujanensis columbianus, S. rutilans caquetensis, S. pudica caucæ, Sclerurus mexicanus andinus, Pipra leucocilla minor, Manacus manacus interior, M. m. bangsi, M. m. leucochlamys, Pachyrhamphus castaneus saturatus, P. magdalenæ, Euchlornis riefferi occidentalis, Pyroderus scutatus occidentalis,* and *Cistothorus apolinari.*

CHAPMAN, FRANK M.—Continued.

——Descriptions of proposed new birds from Central and South America.

Bull. Amer. Mus. Nat. Hist., 34, Art. 11, May 27, 1915, pp. 363–388.

Describes *Odontophorus guianensis panamensis, Rhynchortyx cinctus australis, Columba subvinacea peninsularis, Chæmepelia rufipennis caucæ, Leptotila rufaxilla hellmayri, L. r. pallidipectus, Asio flammeus bogotensis, Cerchneis sparverius caucæ, C. s. fernandensis, Pyrrhura melanura pacifica, Psittacula conspicillata caucæ, Curucujus massena australis, Andigena nigrirostris occiden-*

CHAPMAN, FRANK M.—Continued.

talis, *Chloronerpes rubiginosus buenavistæ*, and *Atlapetes gutturalis brunnescens*. The several forms of *Odontophorus guianensis*, *Leptotila rufaxilla* and *Cerchneis sparverius* are discussed at length.

COALE, HENRY K. The present status of the trumpeter swan (Olor buccinator).

Auk, 32, No. 1, Jan., 1915, pp. 82–90, pls. 7–10.

Notes on the former and present distribution of this species, with records of specimens in American museums.

COOKE, WELLS W. Distribution and migration of North American rails and their allies.

Bull. U. S. Dept. Agric., No. 128, Sept. 25, 1914, pp. 1–50, figs. 1–19.

An account of the distribution and migration of the North American cranes, rails, and allied forms, illustrated by maps.

CORY, CHARLES B. Descriptions of new birds from South America and adjacent islands.

Field Mus. Nat. Hist., *Pub.* 182, *Ornith. Ser.*, 1, No. 8, Feb. 23, 1915, pp. 293–302.

The following are described as new: *Crypturus tataupa peruviana*, *Nothoprocta ambigua*, *Odontophorus plumbeicollis*, *Columba rufina andersoni*, *C. r. tobagensis*, *C. plumbea propinqua*, *C. subvinacea zuliæ*, *Aramides cajanea venezuelensis*, *A. c. peruviana*, *Cerchneis sparverius peruviana*, *C. s. distincta*, *C. s. margaritensis*, *C. s. ochracea*, *Otus choliba margaritæ*, *Speotyto cunicularia arubensis*, *S. c. beckeri*, *S. c. intermedia*, *Podager nacunda minor*, *Nyctidromus albicollis obscurus*, *Caprimulgus hirundinaceus crissalis* and *Threnetes longicauda*.

DWIGHT, JONATHAN, Jr. The moults and plumages of the scoters—genus Oidemia.

Auk, 31, No. 3, July, 1914, pp. 293–308, pls. 24–30.

DWIGHT, JONATHAN, Jr.—Continued.

The sequence of moults in the several species of this genus is described, and distinguishing characters in the shape of the outer primaries are given.

FLEMING, J. H. A new turnagra from Stephens' Island, New Zealand.

Proc. Biol. Soc. Washington, 28, May 27, 1915, pp. 121–123.

Turnagra capensis minor is described, and notes are added on the plumages of *T. c. capensis*.

HEILMANN, GERHARD. Vor nuværende Viden om Fuglenes Afstamning. Fjerde Afsnit: Anatomisk-biologisk Sammenligning.

Dansk Ornith. Forenings Tidsskrift, 9, Hæfte 2–3, Mar., 1915, pp. 97–160, figs. 160–186.

Continuation of a paper on the reptilian origin of birds.

LAW, J. E. Franklin gull: A new record for California.

Condor, 17, No. 2, Mar. 15, 1915, p. 96.

Records the occurrence of three individuals in California.

MEARNS, EDGAR A. Diagnosis of a new subspecies of Gambel's quail from Colorado.

Proc. Biol. Soc. Washington, 27, July 10, 1914, p. 113.

Lophortyx gambelii sanus is diagnosed as new.

——— Descriptions of new African birds of the genera Francolinus, Chalcopelia, Cinnyris, Chalcomitra, Anthreptes, Estrilda, Halcyon, Melittophagus, and Colius.

Proc. U. S. Nat. Mus., 48, No. 2076, Jan. 19, 1915, pp. 381–394.

Francolinus hildebrandti helleri, *Chalcopelia afra kilimensis*, *C. chalcospila intensa*, *C. c. media*, *Cinnyris venusta blicki*, *C. mediocris garguensis*, *C. reichenowi kikuyensis*, *Chalcomitra senegalensis atra*, *Anthreptes collaris garguensis*, *Estrilda atricapilla keniensis*, *Halcyon senegalensis cinerei-*

MEARNS, EDGAR A.—Continued.

capillus, H. malimbicus prenticei, Melittophagus varicgatus loringi and *Colius striatus jebelensis* are described as new.

MURPHY, ROBERT CUSHMAN. (See under John Treadwell Nichols.)

NICHOLS, JOHN TREADWELL, and ROBERT CUSHMAN MURPHY. A review of the genus Phœbetria.

Auk, 31, No. 4, Oct., 1914, pp. 526–534, pl. 41.

Six species and subspecies are recognized, of which *Phœbetria palpebrata audubоni* is described as new.

OBERHOLSER, HARRY C. A synopsis of the races of the long-tailed goatsucker, Caprimulgus macrurus Horsfield.

Proc. U. S. Nat. Mus., 48, No. 2088, May 3, 1915, pp. 587–599.

Nine subspecies are recognized, of which the following are described as new: *Caprimulgus macrurus mesophanis, C. m. anamesus.*

——— A review of the subspecies of the ruddy kingfisher, Entomothera coromanda (Linnæus).

Proc. U. S. Nat. Mus., 48, No. 2090, May 18, 1915, pp. 639–657.

A review of the species *Entomothera coromanda,* of which 9 forms are noticed. *Entomothera coromanda mizorhina, E. c. ucophora, E. c. pagana, E. c. ochrothorectis* and *E. c. bangsi* are new.

RIDGWAY, ROBERT. Descriptions of some new forms of American cuckoos, parrots, and pigeons.

Proc. Biol. Soc. Washington, 28, May 27, 1915, pp. 105–107.

Brief diagnoses are given of the following: *Coccyzus minor palloris, C. m. rileyi, Morococcyx erythropygus mexicanus. Ara militaris mexicana, Conurus holochlorus strenuus, Grammopsittaca lineola maculata, Amazona vittata gracilipes, Notiœnas* (new genus), *Chlorænas inornata exsul, Zenaidura macroura tresmariæ, Zenaida ruficauda robinsoni, Melopelia asiatica mearnsi,* and *Leptotila verreauxi nuttingi.*

RIDGWAY, ROBERT. A new pigeon from Chiriqui, Panama.

Proc. Biol. Soc. Washington, 28, June 29, 1915, p. 139.

Œnœnas chiriquensis is described as new.

RILEY, J. H. On the remains of an apparently reptilian character in the Cotingidæ.

Proc. Biol. Soc. Washington, 27, July 10, 1914, pp. 148, 149.

Notes on supposed pores in the tarsal scales in certain genera of the Cotingidæ.

——— An apparently new Sporophila from Ecuador.

Proc. Biol. Soc. Washington, 27, Oct. 31, 1914, p. 213.

Sporophila incerta is described as new.

SHUFELDT, R. W. Osteology of the passenger pigeon (Ectopistes migratorius).

Auk, 31, No. 3, July, 1914, pp. 358–362, pl. 34.

An account of the skeleton of this species.

——— On the oology of the North American Pygopodes.

Condor, 16, No. 4, July 25, 1914, pp. 169–180, figs. 50–54.

Illustrations of and notes on the eggs of the grebes and loons.

——— Reder og æg af Nordamerikanske Kolibrier (Trochili).

Dansk. Ornith. Forenings Tidsskrift, 8, Hæfte 4, Aug., 1914, pp. 187–195, pls. 2–8.

Describes the nests and eggs of North American hummingbirds.

——— American bob-white and quails.

Outer's Book, 28, 1914, No. 3, Sept., pt. 1, pp. 248–252, figs. 1–3; No. 4, Oct., pt. 2, pp. 356–360, figs. 4–6; No. 5, Nov., pt. 3, pp. 479–482, figs. 7–9; No. 6, Dec., pt. 4, pp. 575–579, figs. 10–13.

An account of the bob-white and related birds of North America.

SHUFELDT, R. W. Contribution to the study of the "tree-ducks" of the genus Dendrocygna.

Zool. Jahrb., 38 (*Abt. für Syst.*), Heft 1–2, 1914, pp. 1–70, pls. 1–16.

An account, chiefly osteological, of the genus Dendrocygna. The tree-ducks are here considered as a subfamily, related to the ducks rather than to the geese.

——— Death of the last of the wild pigeons.

Sci. Amer. Suppl., 78, No. 2024, Oct. 17, 1914, p. 253, 1 fig.

Notice of the individual lately living in the Cincinnati zoological gardens.

——— The last of the passenger pigeons.

Recreation, 51, No. 5, Nov., 1914, p. 277, figs. 1, 2.

Another notice of the above.

——— Anatomical notes on the young of Phalacrocorax atriceps georgianus.

Mus. Brooklyn Inst. Arts and Sci., Sci. Bul., 2, No. 4, Nov. 5, 1914, pp. 95–102, pls. 17, 18.

——— On the skeleton of the ocellated turkey (Agriocharis ocellata) with notes on the osteology of other Meleagridæ.

Aquila, 21, Nov. 15, 1914, pp. 1–52, pls. 1–14.

An account of the skeleton of *Agriocharis ocellata*, with comparative notes on the genus *Melcagris*.

——— "The turkey prehistoric" and "The turkey historic."

Chaps. 3 and 4 in *The Wild Turkey and its Hunting*, by Edward A. McIlhenny; Doubleday, Page & Co., New York, 1914.

——— Anatomical and other notes on the passenger pigeon (Ectopistes migratorius) lately living in the Cincinnati Zoological Gardens.

SHUFELDT, R. W.—Continued.

Auk, 32, No. 1, Jan., 1915, pp. 29–41, pls. 4–6.

——— A unique photograph—the last passenger pigeon.

Blue-Bird, 7, No. 4, Jan., 1915, pp. 85, 86, 1 pl.

Note on the passenger pigeon that died in the zoological gardens at Cincinnati, Sept. 1, 1914—the last of its race.

——— Review of the wild geese of North America.

Outer's Book, 29, 1915, No. 2, Feb., pt. 1, pp. 143–147, figs. 1–3; No. 3, Mar., pt. 2, pp. 241–245, figs. 4–8.

——— Eggs of North American water birds.

Blue-Bird, 7, No. 6, Mar., 1915, (Introduction), pp. 147–149, pl. 1; No. 8, May, pt. 1, pp. 212–217, pls. 2–4.

Account of the eggs of the North American auks.

SWARTH, HARRY S. The California forms of the genus Psaltriparus.

Auk, 31, No. 4, Oct., 1914, pp. 499–526, pl. 40.

Three subspecies are recognized as occurring in California.

TODD, W. E. CLYDE. Preliminary diagnoses of apparently new South American birds.

Proc. Biol. Soc. Washington, 28, Apr. 13, 1915, pp. 79–82.

Brief diagnoses of the following: *Brachyspiza capensis hypoleuca, Sporophila hypochroma, Pheugopedius fasciatoventris cognatus, Hypolophus pulchellus phainolcucus, Erionotus punctatus subcinereus, Drymophila caudata hellmayri, Herpsilochmus sticturus nigrescens, Formicarius moniligcr virescens, Grallaria varia carmelitæ, Setopagis heterurus, Pionus sordidus saturatus, Psittacula passerina cyanophanes, Aratinga æruginosa occidentalis, Pyrrhura molinæ australis* and *Penelope speciosa.*

WETMORE, ALEX. A peculiarity in the growth of the tail feathers of the giant hornbill (Rhinoplax vigil).

Proc. U. S. Nat. Mus., 47, No. 2059, Oct. 24, 1914, pp. 497–500.

WETMORE, ALEX.—Continued.

Describes an aberrant condition in the tail of this species, in which only one feather of the middle pair is moulted each year, instead of the synchronous renewal obtaining in other birds.

REPTILES AND BATRACHIANS.

BARBOUR, THOMAS. Recent notes regarding West Indian reptiles and amphibians.

Proc. Biol. Soc. Washington, 28, Mar. 12, 1915, pp. 71–78.

Based in part on specimens from Porto Rico and Guadeloupe in the U. S. National Museum.

RICHARDSON, C. H. Reptiles of northwestern Nevada and adjacent territory.

Proc. U. S. Nat. Mus., 48, No. 2078, Jan. 19, 1915, pp. 403–435.

Report on collections obtained by the author and Prof. J. O. Snyder while pursuing ichthyological investigations for the U. S. Bureau of Fisheries in the so-called Lahontan Basin during 1911. New subspecies described are *Callisaurus ventralis myurus* and *Uta stansburiana hesperis*.

RICHARDSON, C. H.—Continued.

STEJNEGER, LEONHARD. A new species of tailless batrachian from North America.

Proc. Biol. Soc. Washington, 28, June 29, 1915, pp. 131, 132.

Described as a new species *Syrrhophus campi*, from Brownsville, Texas.

FISHES.

GILBERT, CHARLES HENRY. Fishes collected by the United States Fisheries steamer "Albatross" in southern California in 1904.

Proc. U. S. Nat. Mus., 48, No. 2075, Jan. 28, 1915, pp. 305–380, pls. 14–22.

In this paper the following forms are figured and described as new: *Raja montereyensis, Xenognathus*, new genus (*Alepocephalidæ*), *X. profundorum, Lampanyctus ritteri, Zastomias*, new genus (*Stomiatidæ*), *Zastomias scintillans, Melamphaës bispinosus, M. nycterinus, Sebastodes wilsoni, Icelinus fuscescens, Asterotheca*, new genus (*Agonidæ*), *Xenopyxis*, new subgenus (*Agonidæ*), *Xeneretmus leiops, X. ritteri, Paraliparis caudatus, P. albescens, Liparis cus*, new genus (*Liparididæ*), *L. nanus, Embryx parallelus,*

GILBERT, CHARLES HENRY—Continued.

Maynea californica, Lycogramma, new genus (*Zoarcidæ*), *Bothrocara remigera, Lycodapus mandibularis, L. lycodon, L. attenuatus, L. grossidens, Nematonurus abyssorum, Monocoratias*, new genus (*Ceratiidæ*), *M. acanthias*.

HUBBS, CARL L. Flounders and soles from Japan collected by the United States Bureau of Fisheries steamer "Albatross" in 1906.

Proc. U. S. Nat. Mus., 48, No. 2082, Mar. 20, 1915, pp. 449–496, pls. 25–27.

This paper lists 54 species of flounders and soles found in the coastal waters of Japan, 9 of which are described and figured as new. Three new genera, *Citharoides, Psettina* and *Læoptichthys*, are included.

MOLLUSKS.

BARTSCH, PAUL. Preliminary report on the Bahama cerions planted on the Florida Keys.

Carnegie Inst. of Washington, Year Book, No. 13, 1915, p. 196.

Abstract of report on breeding experiments with Bahama cerions.

——— Report on the Bahama cerions planted on the Florida Keys.

Carnegie Inst. of Washington, Publication No. 212, 1915, pp. 203–212, pls. 1–8.

Discusses breeding experiments with Bahama cerions planted on Florida Keys, reports the status of the various original plantings, discusses new importations, transplantations of first generation of Florida-grown specimens, and records observations on the adult specimens of first generation of Florida-grown individuals with tabulated data.

——— Experiments with cerions in the Florida Keys.

Smithsonian Misc. Colls., 65, No. 6, June 30, 1915, pp. 36–40, figs. 38–40.

Brief report on breeding experiments with Bahama cerions.

——— (See also under John B. Henderson.)

DALL, WILLIAM HEALEY. Notes on West American Emarginulinæ.

Nautilus, 28, No. 6, Oct., 1914, pp. 62–64.

This paper, based on U. S. National Museum material, points out the anatomical differences between Arctic and Antarctic species of this family; describes as new: *Puncturella multistriata, P. caryophylla* and *P. longifissa,* all from the Pacific coast, and maintains the specific rank of *P. cognata* Gould from Patagonia.

DALL, WILLIAM HEALEY. Mollusca from South Georgia.

Mus. Brooklyn Inst. Arts & Sci., Sci. Bull. 2, No. 4, Nov. 5, 1914, pp. 69, 70.

Enumerates the species collected by the South Georgia expedition of which the specimens are in the U. S. National Museum.

——— On some generic names first mentioned in the "Conchological Illustrations."

Proc. U. S. Nat. Mus., 48, No. 2069, Jan. 19, 1915, pp. 437–440.

Contains nomenclatorial data, and proposes for the Californian *Fissurella crenulata* of Sowerby, the new generic name *Macrochasma.*

——— The earliest notice of a species of the genus Gundlachia.

Nautilus, 28, No. 11, Mar., 1915, pp. 128, 129.

A minute shell, which has been referred to the young of *Navicella,* was described by Martin Vahl in 1798, as *Patella aponogctonis.* The characters, however, accord better with the genus *Gundlachia.*

——— Notes on the Semelidæ of the west coast of America, including some new species.

Proc. Acad. Nat. Sci. Phila., Mar. 2, 1915, pp. 25–28.

Based on material in the U. S. National Museum, this paper enumerates the species of the Pacific coast, with corrected nomenclature, and the designation of the following new species: *Semele rupicola, S. regularis, S. pacifica, Abra pacifica, A. tepocana* and *A. palmeri. Semele sparsilineata* is proposed for *S. variegata* Hupe not Lamarck.

DALL, WILLIAM HEALEY. An index to the Museum Boltenianum.

Smithsonian Inst. Special pub. No. 2360, Mar. 8, 1915, pp. 1–64.

An index to the names of mollusks given in the publication of 1798, together with a note on the history of the work and English translations of the Latin and German prefaces of the original.

——— A new species of Modiolaria from Bering Sea.

Nautilus, 28, No. 12, Apr., 1915, p. 138.

Musculus phenax, from the Pribilof Islands, in Alaska, is described as new. The types are in the U. S. National Museum.

FRIERSON, L. S. A new pearly freshwater mussel of the genus Hyria from Brazil.

Proc. U. S. Nat. Mus., 47, No. 2053, Oct. 29, 1914, p. 363, pl. 12.

Describes *Hyria amazonia.*

HENDERSON, JOHN B. Rediscovery of Pourtales' Haliotis.

Proc. U. S. Nat. Mus., 48, No. 2091, May 22, 1915, pp. 659–661, pls. 45, 46.

Describes and figures a unique specimen of *Haliotis (Padollus) pourtalesii* Dall dredged by Mr. Henderson off Sand Key, Florida. He gives the new name *Haliotis (Padollus) dalli* to the Pacific representative of this genus, described as *Haliotis pourtalesii*? Dall.

——— and PAUL BARTSCH. Littoral marine mollusks of Chincoteague Island, Virginia.

Proc. U. S. Nat. Mus., 47, No. 2055, Oct. 29, 1914, pp. 411–421, pls. 13, 14.

A short paper on the results of a day's dredging at Chincoteague Island, Va. A list of species collected is given and the following are described as new: *Epitonium virginicum, Turbonilla (Pyrgiscus) powhatani, T. (P.) pocahontasæ, T. (P.) toyatani, T. (P.) virginica, Odostomia (Chrysallida) toyatani, O. (Evalea) virginica, O. (E.) pocahontasæ, Triphoris pyrrha, Diastoma virginica, Cerithiopsis (Cerithiopsis) virginica.*

ONYCHOPHORES.

CLARK, AUSTIN H. On some onychophores (Peripatus) from the Republic of Panama.

Zool. Anzeiger, 45, No. 4, Dec. 4, 1914, pp. 145, 146.

The recently described *Peripatus (Peripatus) ruber* Fuhrmann is recorded from Panama and some notes on the habits of *Oroperipatus corradoi* (Camerano) are given.

CLARK, AUSTIN H. The present distribution of the Onychophora, a group of terrestrial invertebrates.

Smithsonian Misc. Colls., 65, No. 1, Jan. 4, 1915, pp. 1–25.

The present distribution of the Onychophores is discussed along the lines of biological paleogeography, and a list of all the recent species, with their habitat, is given.

INSECTS.

ALEXANDER, CHARLES P. Description of new species of crane-flies from Central America.

Proc. U. S. Nat. Mus., 48, No. 2080, Feb. 11, 1915, pp. 441–444, pl. 24.

Five new species are described.

BARBER, H. S. Prothetely or semipupal stage in Lopheros fraternus Rand.

Psyche, 21, No. 6, Dec., 1914, pp. 190–192, fig. 1.

BÖVING, ADAM. (See under August Busck.)

BUSCK, AUGUST. New Microlepidoptera from Hawaii.

Insecutor Inscitiæ Menstruus, 2, No. 7, Aug. 3, 1914, pp. 103–107.

Describes the new genus *Petrochroa* (family Cygnodiidæ) and 5 new species.

——— Descriptions of new Microlepidoptera of forest trees.

Proc. Ent. Soc. Washington, 16, No. 4, Dec. 30, 1914, pp. 143–150, pls. 7, 8 (figs. 1, 2, 4).

Describes 10 new species.

——— Life history of Eucosma haracana Kearfott.

Proc. Ent. Soc. Washington, 16, No. 4, Dec. 30, 1914, p. 150, pl. 8 (fig. 3).

——— Descriptions of new North American Microlepidoptera.

Proc. Ent. Soc. Washington, 17, No. 2, June, 1915, pp. 79–94.

Describes 1 new genus and 30 new species.

——— and ADAM BÖVING. On Mnemonica auricyanea Walsingham.

Proc. Ent. Soc. Washington, 16, No. 4, Dec. 30, 1914, pp. 151–168, pls. 9–16.

Describes the early stages and habits.

CAUDELL, A. N. Orthoptera of the Yale-Dominican expedition of 1913.

Proc. U. S. Nat. Mus., 47, No. 2058, Oct. 24, 1914, pp. 491–495.

Records the material collected and describes 2 new species.

——— Rhabdoblatta brunneonigra, a new cockroach from China.

Proc. Ent. Soc. Washington, 17, No. 2, June 8, 1915, pp. 94, 95, fig. 1.

——— Notes on some United States grasshoppers of the family Acrididæ.

Proc. U. S. Nat. Mus., 49, No. 2093, June 12, 1915, pp. 25–31.

Describes 4 new genera, 1 of which is based on new species and 3 on old species, also 1 new variety. Tabulates the genera allied to Heliastus. Gives notes on the synonymy of various species and genera. Proposes 1 new name to replace a preoccupied one.

CAUDELL, A. N.—Continued.

COCKERELL, T. D. A. A new carpenter bee from California.

Insecutor Inscitiæ Menstruus, 2, No. 7, Aug. 3, 1914, pp. 101–103.

Describes *Xylocopa libocedri* n. sp.

——— (See also under Henry L. Viereck.)

CRAWFORD, J. C. Some species of the bee genus Cœlioxys.

Annals Ent. Soc. Amer., 7, No. 2, June, 1914, pp. 148–159, figs. 1–6.

Gives a key to the females and describes 8 new species and 1 new variety.

——— New Philippine Hymenoptera.

Philippine Journ. Sci., 9, No. 5, Sec. D, Sept., 1914, pp. 457–464.

Describes 14 new species.

——— Notes on the chalcidoid family Callimomidæ.

Proc. Ent. Soc. Washington, 16, No. 3, Sept. 26, 1914, pp. 122–126.

Describes 1 new subfamily, 4 new genera and 3 new species.

——— Some new Chalcidoidea.

Insecutor Inscitiæ Menstruus, 2, No. 12, Jan. 14, 1915, pp. 180–182.

Describes 3 new species.

——— Descriptions of new Hymenoptera, No. 9.

Proc. U. S. Nat. Mus., 48, No. 2087, May 3, 1915, pp. 577–586, figs. 1–11.

Describes 10 new species and gives notes on other species.

——— A new species of the genus Secodella.

Proc. Ent. Soc. Washington, 17, No. 2, June 8, 1915, p. 100.

Describes *S. argyresthiæ* n. sp.

CUSHMAN, R. A. A revision of the North American species of the Braconid genus Habrobracon Johnson (Ashmead).

Proc. Ent. Soc. Washington, 16, No. 3, Sept. 26, 1914, pp. 99–109.

Gives a key to the species and describes 2 new species.

——— Descriptions of six new species of ichneumon-flies.

Proc. U. S. Nat. Mus., 48, No. 2085, Mar. 18, 1915, pp. 507–513.

Describes 6 new species and gives notes on the synonymy of the genus *Bassus.*

DE GRYSE, J. J. (See under Carl Heinrich.)

DYAR, HARRISON G. A new Phycitid injurious to pine.

Insecutor Inscitiæ Menstruus, 2, No. 7, Aug. 3, 1914, p. 112.

Describes *Pinipestis erythropasa* n. sp.

——— A new Saturnian from Mexico.

Insecutor Inscitiæ Menstruus, 2, No. 7, Aug. 3, 1914, pp. 107, 108.

Describes *Copaxa mannana* n. sp.

——— A new Syntomid from Cuba.

Insecutor Inscitiæ Menstruus, 2, No. 7, Aug. 3, 1914, pp. 111, 112.

Describes *Zellatilla columbia* n. g., n. sp.

——— The larvæ of some Lepidoptera from Mexico.

Insecutor Inscitiæ Menstruus, 2, No. 8, Aug. 31, 1914, pp. 113–117.

The larvæ of 9 species are described.

——— Utetheisa in Porto Rico.

Insecutor Inscitiæ Menstruus, 2, No. 9, Oct. 2, 1914, pp. 129–131.

Describes 2 new varieties of *U. ornatrix.*

DYAR, HARRISON G. Note on Hemihyalea and some species of Amastus.

Insecutor Inscitiæ Menstruus, 2, No. 10, Oct. 19, 1914, pp. 146–151.

Gives a key to the species of Hemihyalea and one for Amastus, describing 1 new species in each genus.

——— Descriptions of new species and genera of Lepidoptera from Mexico.

Proc. U. S. Nat. Mus., 47, No. 2054, Oct. 24, 1914, pp. 365–409.

Describes 20 new genera, 134 new species and 1 new subspecies.

——— Lepidoptera of the Yale-Dominican expedition of 1913.

Proc. U. S. Nat. Mus., 47, No. 2056, Oct. 24, 1914, pp. 423–426.

Describes 7 new species and 1 new subspecies and gives records for all material collected.

——— New American Lepidoptera.

Insecutor Inscitiæ Menstruus, 2, No. 11, Dec. 7, 1914, pp. 161–164.

Describes 11 new species and 1 new variety.

FELT, E. PORTER. New genera and species of gall midges.

Proc. U. S. Nat. Mus., 48, No. 2072, Jan. 19, 1915, pp. 195–211, figs. 1–15.

Gives geographic distribution of the genera of the family Asphondyliariae and describes 7 new genera and 10 new species.

FISHER, W. S. A new species of Callichroma from Texas.

Proc. Ent. Soc. Washington, 16, No. 3, Sept. 26, 1914, pp. 97, 98.

Describes *C. schwarzi* and gives a key to the species of America north of Mexico.

FISHER, W. S. One new genus and two new species of Cerambycidæ.

Proc. Ent. Soc. Washington, 17, No. 2, June 8, 1915, pp. 77–79.

Describes *Hylotrupes juniperi* n. sp. and *Paratimia conicola* n. g., n. sp.

FOX, CARROLL. Some new Siphonaptera.

Hygienic Laboratory, Washington, Bull. No. 97, Oct., 1914, pp. 7–16, pls. 1–5.

GAHAN, A. B. Descriptions of new genera and species, with notes on parasitic Hymenoptera.

Proc. U. S. Nat. Mus., 48, No. 2068, Dec. 16, 1914, pp. 155–168.

Two new genera and 13 new species are described and notes in the synonymy of species are given.

GIRAULT, A. A. Descriptions of new chalcid-flies.

Proc. Ent. Soc. Washington, 16, No. 3, Sept. 26, 1914, pp. 109–119.

Of the species described in this paper, the types of 2 and paratypes of 1 are in the U. S. National Museum.

HEIDEMANN, OTTO. A new species of North American Tingitidæ.

Proc. Ent. Soc. Washington, 16, No. 3, Sept. 26, 1914, pp. 136, 137, 1 fig.

Describes *Gargaphia solani* n. sp.

HEINRICH, CARL. A new Californian Coleophora on plum.

Insecutor Inscitiæ Menstruus, 2, No. 10, Oct. 19, 1914, p. 145.

Describes *C. sacramenta* n. sp.

——— and J. J. DE GRYSE. On Acrocercops strigifinitella Clemens.

Proc. Ent. Soc. Washington, 17, No. 1, Mar. 16, 1915, pp. 6–23, pls. 1–9.

A full account of the life history and descriptions of the immature stages are given.

HOPKINS, A. D. List of generic names and their type-species in the coleopterous superfamily Scolytoidea.

Proc. U. S. Nat. Mus., 48, No. 2066, Dec. 16, 1914, pp. 115–136.

The author gives a list of the generic names used in the group, the reference to the original description of each genus, the number of species originally included, the type of the genus and the region from which it came.

——— Preliminary classification of the superfamily Scolytoidea.

U. S. Dept. Agric., Bur. Ent., Tech. Ser., 17, pt. 2, Jan. 9, 1915, pp. i–vi, 165–232, pls. 9–16, figs. 96–112.

Describes *Webbia dipterocarpi* n. g., n. sp. Gives an account of the characters and terminology used.

——— Classification of the Cryphalinæ, with descriptions of new genera and species.

U. S. Dept. Agric. Report No. 99, Mar. 10, 1915, pp. 1–75, pls. 1–4, fig. 1.

Describes 23 new genera and 200 new species.

——— Notes on Ipidæ with description of a new species.

Proc. Ent. Soc. Washington, 17, No. 1, Mar. 16, 1915, p. 54.

Describes *Ips radiatæ* new species.

——— A new genus of scolytoid beetles.

Journ. Washington Acad. Sci., 5, No. 12, June 19, 1915, pp. 429–433.

Describes the new genus *Conophthorus* and 14 new species; gives a key to the species.

KNAB, FREDERICK. Supplementary notes on Peruvian Simuliidæ.

Proc. Biol. Soc. Washington, 27, July 10, 1914, pp. 123, 124.

Describes 1 new species.

KNAB, FREDERICK. A review of our species of Trigonometopus (Diptera; Lauxaniidæ).

Psyche, 21, No. 4, Aug., 1914, pp. 123–126.

Gives a key to the species and describes 2 new species.

——— The oriental Trigonometopine flies.

Insecutor Inscitiæ Menstruus, 2, No. 9, Oct. 2, 1914, pp. 131–133.

Describes *Diplochasma* n. g. and *Trigonometopus setosus* n. sp.

——— Two North American Syrphidæ.

Insecutor Inscitiæ Menstruus, 2, No. 10, Oct. 19, 1914, pp. 151–153.

Describes *Syrphus diversifasciatus* n. sp.

——— Drosophilidæ with parasitic larvæ.

Insecutor Inscitiæ Menstruus, 2, No. 11, Dec. 7, 1914, pp. 165–169.

Describes *Gitonides perspicax* n. g. and n. sp. and *Titanochæta ichneumon* n. g. and n. sp.

——— A new Cuterebra from Panama.

Insecutor Inscitiæ Menstruus, 2, No. 12, Jan. 14, 1915, pp. 187, 188.

Describes *C. maculosa* n. sp.

——— New data and species in Simuliidæ.

Insecutor Inscitiæ Menstruus, 2, No. 12, Jan. 14, 1915, pp. 177–180.

Describes 2 new species of Simulium.

——— Some West Indian Diptera.

Insecutor Inscitiæ Menstruus, 3, Nos. 1–4, May 15, 1915, pp. 46–50.

Describes 2 new species.

MCATEE, W. L. Key to the nearctic genera and species of Geocorinæ.

Proc. Biol. Soc. Washington, 27, July 10, 1914, pp. 125–136.

Based largely on U. S. National Museum material from which are described 1 new species and 1 new variety.

MIDDLETON, WILLIAM. Notes on some sawfly larvæ belonging to the genus Dimorphopteryx.

Proc. U. S. Nat. Mus., 48, No. 2083, Mar. 18, 1915, pp. 497–501, pl. 28, figs. 1–4.

Describes the known larvæ of the species of the genus.

MYERS, P. R. Results of the Yale-Peruvian expedition of 1911.—Addendum to the Hymenoptera Ichneumonoidea.

Proc. U. S. Nat. Mus., 47, No. 2052, Oct. 24, 1914, pp. 361, 362.

Describes *Trachysphyrus venustus* n. sp.

PIERCE, W. DWIGHT. Descriptions of two new species of Strepsiptera parasitic on sugar cane insects.

Proc. Ent. Soc. Washington, 16, No. 3, Sept. 26, 1914, pp. 126–129.

Describes 2 new genera and 2 new species.

ROHWER, S. A. Synopsis of the North American species of the genus Capitonius Brulle.

Can. Ent., 46, No. 9, Sept. 8, 1914, pp. 316–322.

Gives a key to the species of the genus and describes 5 new species and proposes 1 new name for a preoccupied one.

——— Descriptions of two parasitic Hymenoptera.

Proc. Ent. Soc. Washington, 16, No. 3, Sept. 26, 1914, pp. 141, 142.

——— Vespoid and sphecoid Hymenoptera collected in Guatemala by W. P. Cockerell.

Proc. U. S. Nat. Mus., 47, No. 2061, Oct. 24, 1914, pp. 513–523.

Eleven new species are described.

——— Description of a new sawfly injurious to strawberries.

Journ. of Economic Ent., 7, No. 6, Dec., 1914, pp. 479–481.

Describes *Empria fragariæ* n. sp.

ROHWER, S. A. Synopsis of the species of sawflies belonging to the genus Dimorphopteryx.

Proc. U. S. Nat. Mus., 48, No. 2081, Feb. 11, 1915, pp. 445–448.

Gives a table of the species of the pinguis group and describes 3 new species.

——— Some oriental sawflies in the Indian Museum.

Records Indian Museum, 11, pt. 1, No. 4, Feb., 1915, pp. 39–53.

This paper is based in part on material in the U. S. National Museum and in it the author describes 2 new genera and 11 new species. Of these new species paratypes of 7 and the allotype of 1 are in the collection of the U. S. National Museum.

——— Description of a new seed chalcid from spruce.

Can. Ent., 47, No. 3, Mar. 10, 1915, pp. 97, 98, 1 fig.

Describes *Megastigmus piceæ* n. sp.

——— Descriptions of Braconidæ.

Proc. Ent. Soc. Washington, 17, No. 1, Mar. 16, 1915, pp. 55, 56.

Gives a key to the 2 North American species of Allodorus, 1 of which is described as new; describes *Macrocentrus ægeriæ* n. sp.

TOWNSEND, CHARLES H. T. New muscoid flies, mainly Hystriciidæ and Pyrrhosiinæ from the Andean Montanya.

Insecutor Inscitiæ Menstruus, 2, No. 8, pp. 123–128, Aug. 31, 1914; No. 9, pp. 133–144, Oct. 2, 1914; No. 10, pp. 153–160, Oct. 19, 1914; No. 11, pp. 169–176, Dec. 7, 1914; No. 12, pp. 183–187, Jan. 14, 1915.

Describes 12 new genera, 33 new species and 5 new subspecies. Gives notes on other species and genera.

TOWNSEND, CHARLES H. T. A genus of Hystrictiine flies with white maggots.

Insecutor Inscitiæ Menstruus, 3, Nos. 1–4, May 15, 1915, pp. 45, 46.

Describes *Sorochemyia oroya* n. g., n. sp.

——— An acalyptrate genus of Muscoidea.

Insecutor Inscitiæ Menstruus, 3, Nos. 1–4, May 15, 1915, p. 41.

Describes *Eucordylidexia ategulata* n. g., n. sp.

——— A polistiform genus of muscoid flies.

Insecutor Inscitiæ Menstruus, 3, Nos. 1–4, May 15, 1915, pp. 43, 44.

Describes *Polistiopsis mima* n. g., n. sp.

——— Correction of the misuse of the generic name Musca, with description of two new genera.

Journ. Washington Acad. Sci., 5, No. 12, June 19, 1915, pp. 433–436.

Describes 2 new genera.

VIERECK, HENRY L., and T. D. A. COCKERELL. New North American bees of the genus Andrena.

Proc. U. S. Nat. Mus., 48, No. 2064, Nov. 28, 1914, pp. 1–58.

Of the forms described, the types of 29 and paratypes of 1 are in the U. S. National Museum.

WALTON, W. R. A new Tachinid parasite of Diapheromera femorata Say.

Proc. Ent. Soc. Washington, 16, No. 3, Sept. 26, 1914, pp. 129–132, 1 pl.

Describes *Euhallidaya severinii* n. g., n. sp.

——— Report on some parasitic and predaceous Diptera from northeastern New Mexico.

Proc. U. S. Nat. Mus., 48, No. 2070, Dec. 16, 1914, pp. 171–186, pls. 6, 7.

Two new genera and 3 new species are described.

WILLIAMSON, EDWARD BRUCE. Notes on neotropical dragonflies, or Odonata.

Proc. U. S. Nat. Mus., 48, No. 2089, May 12, 1915, pp. 601–638, pls. 38–44, 1 fig.

WILLIAMSON, EDWARD BRUCE—Contd.

This paper is in part based on Museum material and paratypes of 7 of the new species described are in the U. S. National Museum.

CRUSTACEANS.

HANSEN, H. J. The Crustacea Euphausiacea of the United States National Museum.

Proc. U. S. Nat. Mus., 48, No. 2065, Jan. 19, 1915, pp. 59–114, pls. 1–4.

Complete report on the Museum Euphausiacea, with descriptions and figures of several forms, and an enumeration of the localities for every species.

RATHBUN, MARY J. Stalk-eyed crustaceans collected at the Monte Bello Islands.

Proc. Zool. Soc. London, Sept., 1914, pp. 653–664, pls. 1, 2.

Describes 3 new species: *Periclimenes hermitensis, Actæa glandifera* and *Glyptoxanthus cymbifer.* Paratypes of these species are in the collection of the U. S. National Museum. A new name, *Thalamita dispar,* is given to one of the numerous forms related to *T. admete,* previously assigned by de Man to *T. savignyi.* Notes discovery that at least one of the marine crabs, *Naxioides serpulifera* (Guérin), undergoes transformation to adult form while still within the brood pouch of the mother.

——— A new genus and some new species of crabs of the family Goneplacidæ. [Scientific results of the Philippine cruise of the Fisheries steamer "Albatross," 1907–1910.—No. 32.]

Proc. U. S. Nat. Mus., 48, No. 2067, Dec. 16, 1914, pp. 137–154.

Describes 17 new species: *Carcinoplax bispinosa, C. spinosissima, C. confragosa, C. purpurea, C. angusta, C. verdensis, C. specularis, Psopheticus hughi, Goneplax renoculis, Ceratoplax fulgida, C. truncatifrons, Typhlocarcinus craterifer, Hephthopelta apta, Chasmocarcinus cavimanus, Typhlocarcinops decrescens, T. marginata, T. angustifrons, T. ocularia,* and a new genus, *Homoioplax,* founded on *Pseudorhombila haswelli* Miers.

RATHBUN, MARY J.—Continued.

——— New fresh-water crabs (Pseudothelphusa) from Colombia.

Proc. Biol. Soc. Washington, 28, Apr. 13, 1915, pp. 95–100.

Describes 4 new species: *Pseudothelphusa pearsei, P. angulata, P. clausa, P. ruthveni.* The types are in the Museum of Zoology, University of Michigan; the paratypes and cotypes are in the U. S. National Museum.

——— New species of decapod crustaceans from the Dutch West Indies.

Proc. Biol. Soc. Washington, 28, May 27, 1915, pp. 117–119.

Describes 2 new species: *Metapenæus mobilispinis* (Family Peneida) and *Panopeus bœkei* (Family Xanthidae). The type specimens are in the Leiden Museum; the paratypes are in the U. S. National Museum.

——— Jacquinotia, a new crab name.

Proc. Biol. Soc. Washington, 28, June 29, 1915, p. 142.

Jacquinotia a new name for *Prionorhynchus,* type *P. edwardsii,* from Auckland Islands, Jacquinot (1853), which had been used by Leach for *P. cranchianus,* Trans. Plymouth Inst., 1830.

SHOEMAKER, CLARENCE R. Amphipods of the South Georgia expedition.

Mus. Brooklyn Inst. Arts and Sci., Sci. Bull., 2, No. 4, Nov. 5, 1914, pp. 73–77.

An annotated list of the amphipods taken on the South

SHOEMAKER, CLARENCE R.—Contd.

Georgia expedition together with bibliography. Duplicates of the specimens upon which this paper is based are in the U. S. National Museum.

WILSON, CHARLES BRANCH. North American parasitic copepods belonging to the Lernaeopodidae, with a revision of the entire family.

Proc. U. S. Nat. Mus., 47, No. 2063, Mar. 6, 1915, pp. 565–729, pls. 25–56, figs. 1–15.

Twelve new genera and 21 new species are described. The new genera are *Salmincola, Lernæopodina, Brianella, Thomsonella, Thysanotella, Clavellopsis, Clavellodes, Clavellisa, Parabrachiella, Epibrachiella, Probrachiella, Eubrachiella.* The new species are *S. oquassa; L. relata, Tracheliastes grandis; B. corniger; Naobranchia occidentalis; Clavella perfida, C. tumida, C. canaliculata, C. insolita, C. levis, C. pinguis, C. squamigera, C. recta, C. irina; Clavellopsis producta; Clavellisa spinosa, C. cordata; Brachiella gulosa, B. mitrata, B. pinguis, B. nitida.* The ecology, morphology, physiology, ontogeny and taxonomy are fully discussed, and illustrated in part.

WILSON, CHARLES BRANCH—Contd.

ANNULATES.

HALL, MAURICE C. Descriptions of a new genus and species of the discodrilid worms.

Proc. U. S. Nat. Mus., 48, No. 2071, Dec. 16, 1914, pp. 187–193, figs. 1–3.

Describes *Ceratodrilus thysanosomus* belonging to the family Branchiobdellidae, new superfamily Branchiobdelloidea, from a crayfish found in streams of the Great Basin, Salt Lake City, Utah. Type specimen in the U. S. National Museum.

HALL, MAURICE C.—Continued.

ECHINODERMS.

CLARK, AUSTIN H. The correlation between the bathymetrical and the geographical range in the recent crinoids.

Journ. Washington Acad. Sci., 4, No. 19, Nov. 19, 1914, pp. 558–564, figs. 1, 2.

A close correspondence is shown between the bathymetric range of the recent crinoids measured in fathoms, and the potential geographical range, measured in units of 15 degrees on each side.

——— The relation between recent crinoids and the temperature of their habitat.

Journ. Washington Acad. Sci., 4, No. 20, Dec. 4, 1914, pp. 579–583, figs. 1–3.

From the available data it appears that the recent crinoids existing within the optimum temperature range for the group (55–65 Fahrenheit) are conservative in their characters, and approach most closely the related fossil types.

CLARK, AUSTIN H.—Continued.

——— The Atlantic Ocean biologically an inland sea.

Internationale Revue der gesamten Hydrobiologie und Hydrographie, 6 (suppl.), 1914, pp. 1–18.

A comparison between the crinoid fauna of the Atlantic and that of the Indo-Pacific region suggests that the former is essentially the fauna of an inland sea tributary to the Indo-Pacific.

——— The geographical divisions of the recent crinoid fauna.

Journ. Washington Acad. Sci., 5, No. 1, Jan. 4, 1915, pp. 7–11.

The faunal regions into which the recent crinoids are, more or less sharply, segregated are outlined.

CLARK, AUSTIN H. The bathymetrical distribution of the Arctic and Antarctic crinoids.

Journ. Washington Acad. Sci., 5, No. 3, Feb. 4, 1915, pp. 76–82, figs. 1, 2.

A detailed comparison between the crinoid fauna of the Arctic and that of the Antarctic Ocean is given.

——— On certain aspects of the bathymetrical distribution of the recent crinoids.

Journ. Washington Acad. Sci., 5, No. 4, Feb. 19, 1915, pp. 125–134, 1 fig.

The bathymetrical distribution of the recent crinoids in its relation to paleontological problems is considered.

——— The bathymetrical and thermal distribution of the unstalked crinoids, or comatulids, occurring on the coasts of China and Japan.

Journ. Washington Acad. Sci., 5, No. 6, Mar. 19, 1915, pp. 213–218, figs. 1, 2.

The faunal relationships of the crinoids of China and Japan are discussed.

——— The correlation of phylogenetic specialization and bathymetrical distribution among the recent crinoids.

Journ. Washington Acad. Sci., 5, No. 9, May 4, 1915, pp. 309–317, figs. 1, 2.

Phylogenetical specialization in its relationship to bathymetrical distribution among the recent crinoids is discussed.

——— Die Crinoiden der Antarktis.

Deutsche Südpolar Exped., 16, (Zoologie vol. 8), May 16, 1915, pp. 103–209, pls. 1–10.

This is a complete monograph of the Antarctic crinoids, including a history of the subject, a systematic survey, and a full discussion of the faunal inter-relationships of the Antarctic regions.

——— The crinoids collected by the Endeavour between Fremantle and Geraldton (Western Australia).

CLARK, AUSTIN H.—Continued.

Rec. West. Australian Mus. and Art Gallery, 1, pt. 3, 1915, pp. 113–131.

The crinoids collected by the "Endeavour" in southwestern Australia are listed, and two new species, representing a family new to the Australian region are described. The new species are *Neometra gorgonia* and *N. conaminis*. Cotypes and duplicates of the specimens on which this paper is based are in the U. S. National Museum.

——— Echinoderma II: Crinoidea.

Beitr. zur Kenntnis der Meeresfauna Westafrikas, published by W. Michaelsen (Hamburg), 1914, pp. 307–318.

This paper includes a discussion of the Atlantic crinoid fauna, an account of the crinoid fauna of the west coast of Africa, a survey of the genus *Tropiometra*, and a revision of the genus *Antedon*.

——— A monograph of the existing crinoids, I, The Comatulids, pt. 1.

Bull. U. S. Nat. Mus., No. 82, June 10, 1915, pp. i–vi, 1–406, pls. 1–17, figs. 1–513.

An introductory volume giving the history of the subject, and a description of the apical portion of the skeleton.

OHSHIMA, HIROSHI. Report on the holothurians collected by the United States Fisheries steamer "Albatross" in the northwestern Pacific during the summer of 1906.

Proc. U. S. Nat. Mus., 48, No. 2073, Feb. 11, 1915, pp. 213–291, pls. 8–11.

Records 11 species which for the first time are reported from the northwest Pacific and describes as new the following (44 species and 1 subspecies)—*Synallactes multivesiculatus, S. gilberti, Bathyplotes östergreni, Mesothuria media, Pseudostichopus alcutianus, P. molpadioides, P. arenosus, P. nudus, P. unguiculatus, Capheira mollis, Deima mosaicum, Orphnurgus rigidus,*

OHSHIMA, HIROSHI—Continued.

Pannychia moseleyi virgulifera, Ilyodæmon miurense, Peniagone japonica, Achlyonice monactinica, Scotoplanes théeli, Benthodytes gotoi, Molpadia clarki, M. infesta, Caudina ludwigi, Cucumaria ijimai, C. lamperti, C. spinosa, C. sluiteri, C. constricta, C. globosa, Thyone punctata, T. parva, T. bicornis, T. imbricata, Pscudocucumis dactylicus, P. watasci, P. sagamiensis, P. tabulatus, Phyllophorus-cylindricus, P. glacus, P. diomedeæ, P. minutus, Psolidium vitreum, P. bullatum, Protankyra kagoshimensis, Tæniogyrus cidaridis, Toxodora pacifica, Myriotrochus mitsukurii.

VERRILL, ADDISON EMERY. Report on the starfishes of the West Indies, Florida, and Brazil, including those obtained by the Bahama expedition from the University of Iowa in 1893.

Bull. Lab. Nat. Hist., Univ. Iowa, 7, No. 1 (n. s.), No. 92, Mar. 20, 1915, pp. 1–232, pls. 1–29.

Of the 95 species described or figured, specimens from the collections of the U. S. National Museum are represented in 45 instances. Twelve new species and 3 new varieties are included. Ten of the types of the new species and of 2 varieties are the property of the Museum. At the end of the paper a list of 44 additional deep-water species, not reported upon, has been appended for the sake of completeness. The morphologic and taxonomic features of the Asterioidea are briefly discussed. The new species are as follows: *Stephanasterias hebes, Henricia microspina, Solaster caribbæus, Ophidiaster alexandria, Cheiraster planus, Ch. enoplus, Pectinaster mixtus, P. gracilis, P. dispar, Astropecten comptus, A. nitidus, A. nuttingi;* New varieties: *Astropecten nitidus* var. *forcipatus, A. americanus* var. *subgracilis, Luidia alternata* var. *bicolor.*

VERRILL, ADDISON EMERY—Continued.

TROCHELMINTHS.

HARRING, HARRY K. Report on Rotatoria from Panama with descriptions of new species.

Proc. U. S. Nat. Mus., 47, No. 2062, Dec. 15, 1914, pp. 525–564, pls. 16–24.

Describes nineteen new species: *Brachionus dolabratus, Lecane crepida, L. sibina, L. marshi, L. ercodes, L. arcula, L. compta, L. pusilla, L. aeganca, L. doryssa, L. tenuiseta, L. amorpha, L. elegans, Monostyla virga, M. rugosa, Lepadella imbricata, L. cyrtopus, Trichocerca nitida, Collotheca polyphema.* Notes on distribution, habitat and preservation are included.

HARRING, HARRY K.—Continued.

NEMATODES.

FOSTER, W. D. Observations on the eggs of Ascaris lumbricoides.

Journ. Parasitol., Urbana, Ill., 1, No. 1, Sept., 1914, pp. 31–36, figs. 1–4.

A report on the variations in size and shape of eggs of *Ascaris lumbricoides* from man and swine.

——— A peculiar morphologic development of an egg of the genus Tropidocerca and its probable significance.

Journ. Parasitol., Urbana, Ill., 1, No. 1, Sept., 1914, pp. 45–47, fig. 1.

FOSTER, W. D.—Continued.

Description of filamentous appendages found on the ends of the egg, probably serving to hold the eggs together in clumps.

HALL, M. C. A note on Syngamus laryngeus from cattle in the Philippine Islands.

Amer. Journ. Vet. Med., Chicago, 10, No. 6, June, 1915, pp. 395, 396, figs. 1–3.

The second record of the occurrence of this parasite based on specimens in the U. S. National Museum received from Dr. Wm. Boynton, Manila, P. I.

——— (See also under B. H. Ransom.)

RANSOM, B. H., and M. C. HALL. The life history of Gongylonema scutatum.

Journ. Parasitol., Urbana, Ill., 1, No. 3, Mar., 1915, p. 154.

Abstract of a paper read before the Helminthological Society of Washington, Dec. 17, 1914. Encysted larval nematodes were found in the body cavity of various species of dung beetles (*Aphodius* and *Onthophagus*) at Bethesda, Md. Certain morphological characters suggested the possibility that they were the larvæ of *Gongylonema*. Dissection of larval dung beetles disclosed the presence of young nematode larvæ which agreed exactly with the embryos from the eggs of *Gongylonema scutatum*.

PLATYHELMINTHS.

HALL, M. C. [A second case of Fasciola magna in the sheep.]

Journ. Parasitol., Urbana, Ill., 1, No. 2, Dec., 1914, p. 106.

Abstract of remarks before the Helminthological Society of Washington, Sept. 22, 1914. Specimens in the U. S. National Museum collections collected from a sheep at Ovando, Mont. The parasite appears to be of rare occurrence in this host.

——— Tænia saginata. A case presenting structural abnormalities and associated with spurious parasitism in an infant.

Journ. Amer. Med. Ass. Chicago, 64, No. 24, June 12, 1915, pp. 1972, 1973, 1 fig.

Report of a case in which a segment of the tapeworm contains two genital pores instead of one. Record of a case of spurious parasitism with the larvæ of a beetle, *Tenebroides mauritanicus*.

CŒLENTERATES.

NUTTING, CHARLES CLEVELAND. American Hydroids, Pt. III. The Campanularidæ and the Bonneviellidæ.

Special Bull. U. S. Nat. Mus., Apr. 10, 1915, pp. i–iii, 1–126, pls. 1–27, figs. 1–70.

Describes 5 new species: *Campanularia spiralis, C. brevicaulis, Clytia sargassicola* (Campanularidæ); *Bonneviella superba, B. ingens* (Bonneviellidæ). Gives extended treatment of morphology, development, and taxonomy.

VAUGHAN, T. WAYLAND. Reef corals of the Bahamas and of southern Florida.

Carnegie Inst. of Washington, Year Book No. 13, 1915, pp. 222–226, figs. 7, 8.

Abstract of results of field work and experimental investigations on corals in the Bahamas and Florida during May and June, 1914.

——— Coral reefs and reef corals of the southeastern United States, their geologic history and significance.

Bull. Geol. Soc. Am., 26, 1914, pp. 58–60.

Abstract from the manuscript of a report prepared for publication elsewhere.

PROTOZOANS.

CUSHMAN, JOSEPH AUGUSTINE. A monograph of the Foraminifera of the North Pacific Ocean, Pt. 5, Rotaliidæ.

Bull. U. S. Nat. Mus., No. 71, Apr. 24, 1915, pp. i–vii, 1–87, pls. 1–31, figs. 1–62.

This is the fifth part of a work on the Foraminifera of the North Pacific Ocean. In it the author describes 3 subfamilies, 17 genera, 93 species and 7 varieties; all but four of the species are figured. There are 4 new species: *Spirillina operculoides, S. guttata, Discorbis subfilosa, D. pulvinulinoides;* and 3 new varieties: *Spirillina limbata* var. *papillosa, Discorbis globularis* var. *bradyi, Cymbalopora poeyi* var. *bradyi*.

BOTANY.

CHASE, AGNES. Field notes on the climbing bamboos of Porto Rico.

Botan. Gaz., 58, No. 3, Sept., 1914, pp. 277–279, pl. 21.

——— A teretological specimen of Panicum amarulum Hitchc. & Chase.

Rhodora, 17, No. 195, Mar., 1915, p. 72.

COOK, O. F. A new genus of palms allied to Archontophœnix.

Journ. Washington Acad. Sci., 5, No. 4, Feb. 19, 1915, pp. 116–122.

——— Glaucothea, a new genus of palms from Lower California.

Journ. Washington Acad. Sci., 5, No. 7, Apr. 4, 1915, pp. 236–241.

——— Tribroma, a new genus of tropical trees related to Theobroma.

Journ. Washington Acad. Sci., 5, No. 8, Apr. 19, 1915, pp. 287–289.

GREENE, EDWARD L. Field-notes of western botany.—I.

Amer. Midland Naturalist, 3, No. 11, Aug., 1914, pp. 311–317.

——— New species of Ranunculus.

Amer. Midland Naturalist, 3, No. 12, Nov., 1914, pp. 333–335.

——— Violets of the District of Columbia, I.

Cybele Columbiana, 1, No. 1, Dec. 29, 1914, pp. 7–33.

——— Manipulus Malvacearum, I.

Cybele Columbiana, 1, No. 1, Dec. 29, 1914, pp. 33–36.

HITCHCOCK, A. S. A text-book of grasses.

The Macmillan Co., New York, 1914, pp. i–xvii, 1–276, frontispiece, figs. 1–63.

LEWTON, F. L. The Australian Fugosias.

Journ. Washington Acad. Sci., 5, No. 9, May 4, 1915, pp. 303–309.

LEWTON, F. L.—Continued.

The paper undertakes to demonstrate that a group of Australian plants related to the cottons and by many botanists placed in the genera *Hibiscus, Fugosia* or *Gossypium*, do not in reality belong to any of these, but constitute two distinct valid genera, *Notoxylinon* and *Allogyne*, which are there diagnosed, the first named being published as a new genus.

MAXON, WILLIAM R. The North American species of Psilogramme.

Bull. Torrey Bot. Club, 42, No. 2, Feb. 27, 1915, pp. 79–86.

Critical notes, with key to the 8 species, 3 of which are described as new.

——— Notes on American ferns: IX.

Amer. Fern Journ., 5, No. 1, Mar., 1915, pp. 1–4.

Notes upon several United States species, including publication of the new name *Notholæna standleyi* to replace *N. hookeri* D. C. Eaton (1879), not Lowe (1856).

——— Notholæna aschenborniana and a related new species.

Amer. Fern Journ., 5, No. 1, Mar., 1915, pp. 4–7.

Describes *Notholæna hyalina*, a new species from Mexico.

——— Polypodium marginellum and its immediate allies.

Bull. Torrey Bot. Club, 42, No. 4, Apr. 24, 1915, pp. 219–225.

Discusses the 6 species of this group. Of these 2 are described as new: *Polypodium hessii*, from Porto Rico, and *P. ebeninum*, from St. Helena.

——— Report upon a collection of ferns from western South America.

Smithsonian Misc. Colls., 65, No. 8, May 3, 1915, pp. 1–12.

Includes descriptions of 6 new species in the genera *Polypodium, Cheilanthes, Notholæna*, and *Dryopteris*.

MAXON, WILLIAM R. Note on Polypodium subtile and a related species.

Amer. Fern Journ., 5, No. 2, May, 1915, pp. 50–52.

Proposes the new name *Polypodium cretatum* for a Jamaican species erroneously known as *P. albopunctatum* Baker.

PIPER, CHARLES V. Andropogon halepensis and Andropogon sorghum.

Proc. Biol. Soc. Washington, 28, Mar. 12, 1915, pp. 25–43.

The type of one of the new subspecies is in the National Herbarium.

SAFFORD, WILLIAM E. Acacia cornigera and its allies.

Journ. Washington Acad. Sci., 4, No. 13, July 19, 1914, pp. 356–368.

The types of 7 of the new species described are in the National Herbarium.

——— New or imperfectly known species of bull-horn acacias.

Journ. Washington Acad. Sci., 5, No. 10, May 19, 1915, pp. 355–360, figs. 1, 2.

The types of 2 of the new species are in the National Herbarium.

ST. JOHN, HAROLD. Elymus arenarius and its American representatives.

Rhodora, 17, No. 197. May, 1915, pp. 98–103.

The type of a new species described here, *Elymus strigatus*, is in the National Herbarium.

STANDLEY, PAUL C. A new Amelanchier from southeastern California.

Proc. Biol. Soc. Washington, 27, Aug. 13, 1914, pp. 197, 198.

——— The genus Arthrocnemum in North America.

Journ. Washington Acad. Sci., 4, No. 14, Aug. 19, 1914, pp. 398, 399.

——— Therorhodion glandulosum, sp. nov.

North Amer. Flora, 29, pt. 1, Aug. 31, 1914, p. 45.

STANDLEY, PAUL C. A list of Hepaticæ from western North Carolina.

The Bryologist, 17, No. 5, Oct. 14, 1914, pp. 69–71.

——— New or notable species of Amaranthus.

Bull. Torrey Bot. Club, 41, No. 10, Oct. 30, 1914, pp. 505–510.

Includes descriptions of 2 new species.

——— The ferns of Brazos Canyon, New Mexico.

Amer. Fern Journ., 4, No. 4, Dec. 28, 1914, pp. 109–114, pls. 1, 2.

——— The genus Choisya.

Proc. Biol. Soc. Washington, 27, Dec. 29, 1914, pp. 221–224.

Includes descriptions of 3 new species.

——— Two plants new to the flora of Louisiana.

Torreya, 15, No. 1, Jan. 13, 1915, pp. 9–11, fig. 1.

——— A new genus of Chenopodiaceæ, from Arizona.

Journ. Washington Acad. Sci., 5, No. 2, Jan. 19, 1915, pp. 57–59.

——— The application of the generic name Achyranthes.

Journ. Washington Acad. Sci., 5, No. 3, Feb. 4, 1915, pp. 72–76.

——— A new species of Achyranthes from Tobago.

Proc. Biol. Soc. Washington, 28, Apr. 13, 1915, pp. 87, 88.

——— The North American tribes and genera of Amaranthaceæ.

Journ. Washington Acad. Sci., 5, No. 11, June 4, 1915, pp. 391–396.

——— (See also under E. O. Wooton.)

SWINGLE, WALTER T. A new genus, Fortunella, comprising four species of Kumquat oranges.

Journ. Washington Acad. Sci., 5, No. 5, Mar. 4, 1915, pp. 165–176, figs. 1–5.

SWINGLE, WALTER T. Merope angulata, a salt-tolerant plant related to Citrus, from the Malay Archipelago.

Journ. Washington Acad. Sci., 5, No. 12, June 19, 1915, pp. 420–425, figs. 1, 2.

VAN ESELTINE, GLEN P. An abnormal specimen of Citrullus vulgaris.

Torreya, 15, No. 3, Apr. 15, 1915, pp. 44, 45, figs. 1, 2.

WOOTON, E. O., and PAUL C. STANDLEY. Flora of New Mexico.

Contr. U. S. Nat. Herb., 19, June 24, 1915, pp. 1–794.

A systematic account of all the phanerogams and vascular cryptogams known to occur in the State, accompanied by keys to the families, genera, and species. Notes upon habitat, range, and local distribution are included, as well as a citation of the type locality of each species. There are listed 2903 species, distributed among 848 genera. The volume contains also a geographic index of all the localities mentioned in the text.

GEOLOGY AND MINERALOGY.

CROSS, WHITMAN. Lavas of Hawaii and their relations.

Prof. Paper, U. S. Geol. Surv., 88, 1915, pp. 1–97, pls. 1–4, 1 insert.

A complete petrographic description of these rocks, including many in the collection of the U. S. National Museum.

MERRILL, GEORGE P. The Fisher, Polk County, Minnesota, meteorite.

Proc. U. S. Nat. Mus., 48, No. 2084, May 3, 1915, pp. 503–506, pl. 29.

Redescribes in detail an old and imperfectly described meteoric stone.

——— On the monticellite-like mineral in meteorites, and on oldhamite as a meteoric constituent.

Proc. Nat. Acad. Sci., 1, May, 1915, pp. 302–308, figs. 1–5.

Shows that the monticellite-like mineral of German and other writers is in part at least a phosphate; also that the sulphide of calcium, oldhamite, is apparently a much more common constituent than is generally supposed.

POGUE, JOSEPH E. The turquoise. A study of its history, mineralogy, geology, ethnology, archæology, mythology, folklore, and technology.

Memoirs Nat. Acad. Sci., 12, pt. 2, 3d memoir, 1915, pp. 1–206, frontispiece, pls. 1–22, figs. 1–5.

A summary of practically everything known concerning the mineral turquoise.

WHERRY, EDGAR T. Notes on wolframite, beraunite, and axinite.

Proc. U. S. Nat. Mus., 47, No. 2060, Oct. 24, 1914, pp. 501–511.

Mineralogical and chemical descriptions of 2 specimens of wolframite, 1 of beraunite, and 2 of axinite.

——— The microspectroscope in mineralogy.

Smithsonian Misc. Colls., 65, No. 5, 1915, pp. 1–16, 1 fig.

Discussion of the use of the microspectroscope, of the results of the examination of about 200 minerals and gems in the National Museum collections with the instrument, and of the conclusions as to the value of the instrument for indicating the compositions of minerals and for their identification.

WRIGHT, FRED. E. Obsidian from Hrafntinnuhryggur, Iceland: Its lithophysæ and surface markings.

Bull. Geol. Soc. Amer., 26, No. 2, June 29. 1915, pp. 255–286. figs. 1–12.

WRIGHT, FRED. E.—Continued.

Describes the physical and chemical properties of these obsidians with especial reference to the formation of their included spherulites and lithophysæ, which are considered due to the influence of gases. "The general hydrostatic tension resulting from shrinkage of the central part of the cooling magma probably aided in this development, but the inclosed gas pressing against the walls of the cavity was also an important factor." Incidental attention is given to peculiar surface markings noted on several of the specimens which had previously been referred to by Merrill (Proc. U. S. Nat. Mus., vol. 40, 1911) as closely simulating the markings of the moldavites and which had been assumed by Suess to be indicative of a meteoric origin. It was shown that in this case the etchings were of terrestrial origin, and in this, as well as the condition of strain exhibited by the glass, the opinions advanced by Merrill were fully corroborated.

PALEONTOLOGY.

BERRY, EDWARD W. Two new Tertiary species of Trapa.

Torreya, 14, No. 6, June, 1914, pp. 105–108, 1 fig.

Describes and figures 2 new species, *Trapa wilcoxensis* and *T. alabamensis.*

——— The affinities and distribution of the Lower Eocene flora of southeastern North America.

Proc. Amer. Philos. Soc., 53, No. 214, June-July, 1914, pp. 129–250, 1 fig.

A very thorough discussion of the ecology, affinities, and distribution of the Lower Eocene flora of the region treated.

——— Additions to the Pleistocene flora of the southern states.

Torreya, 14, No. 9, Sept., 1914, pp. 159–162.

Adds about 10 species to the late Pleistocene flora of the region.

——— The Mississippi River bluffs at Columbus and Hickman, Kentucky, and their fossil flora.

Proc. U. S. Nat. Mus., 48, No. 2074, Jan. 28, 1915, pp. 293–303, pls. 12, 13.

Discusses the stratigraphy and describes 17 species of plants from this area, showing thereby that the strata are of Pleistocene age and not early Eocene as heretofore supposed.

DALL, WILLIAM HEALEY. A monograph of the molluscan fauna of the Orthaulax pugnax zone of the Oligocene of Tampa, Florida.

Bull. U. S. Nat. Mus., No. 90, Jan. 21, 1915, pp. i–xv, 1–173, pls. 1–26.

The types of this monograph are in the U. S. National Museum. The new genus *Microcerion* is described from a fossil land shell, and the following new species are added to the catalogue of those already known: *Bulimulus (Hyperaulax) tampae, B. (H.) ballistae, B. (H.) tortilla, B. (H.) remolina, Microcerion floridanum, Pupoides pilsbryi, Planorbis tampaënsis, P. (Torquis) elisus, Spiraxis tampae, Acteon tampae, Acteocina squarrosa, Bullaria (Haminea?) sulcobasis, Conus illiolus, C. designatus, Turris albida, Drillia condominia, D. sevcrina, D. sella, D. eupora, D. belotheca, D. spica, D. tecla, D. smilia, D. eupatoria, D. tama, D. glyphostoma, D. (Cymatosyrinx) silfa, Mangilia illiota, Cancellaria (Bivetopsia) subthomasiae, C. (B.) depressa, Oliva posti, Olivella eutorta, O. colleta, Marginella mollitor, M. infecta, M. gregaria, M. impagina, M. posti, M. intensa, M. myrina, Lyria silicata, Mitra syra, M. myra, Strigatella americana, Fasciolaria petrosa, Alectrion ursula, A. ethelinda, A. gardnerae, Anachis cutheria, Astyris cluthera, A. dicaria, A. acanthodes, Murex sexangula, Tritonalia scabrosa, Typhis siphonifera, Rapana biconica, Eulima*

DALL, WILLIAM HEALEY—Continued.

bowdichi, Turbonilla (Ptycheulima) ethellina, Cypræa ballista, Strombus liocyclus, Bittium (priscum var.?) *sora, B. adela, Cerithium plectrum, Cerithiopsis silicata, Lacuna precursor, Turritella (tampac* var.?) *mcdioconstricta, T. systoliata, T. litharia, T. atacta, Assiminea aldra, Rissoina supralaevigata, Amnicola adesta, Sinum imperforatum, Calliostoma tampicum, Helicina posti, Nucula tampae, Leda posti, Arca grammatodonta, Glycymeris lamyi, Ostrea vaughani, Modiolus blandus, M. (Brachydontes) grammatus* var. *curtulus, M. (Gregariella) minimus, Cardita (Glans) shepardi, Codakia (Jagonia) scurra, Phacoides (Bellucina) tampaënsis, Diplodonta catopotium, Erycina? indecisa, Bornia tampae, Cardium (Trigoniocardia) berberum, Callocardia (Agriopoma) nux, Tellina dira, T. (Angelus) atossa, Semele sardonica, Corbula (Cuneocorbula) kaghriana.*

GIDLEY, JAMES WILLIAMS. An extinct marsupial from the Fort Union with notes on the Myrmecobidae and other families of this group.

Proc. U. S. Nat. Mus., 48, No. 2077, Jan. 28, 1915, pp. 395–402, pl. 23.

Describes a new genus and species of marsupial, *Myrmecoboides montanensis*, comparing it especially with the living *Myrmecobius*. The description is followed by a brief discussion of the peculiar features of the species, its possible affinities, and the probable origin of the marsupials, based on the known fossil remains.

GILMORE, CHARLES WHITNEY. Osteology of the armored Dinosauria in the United States National Museum, with special reference to the genus Stegosaurus.

Bull. U. S. Nat. Mus., No. 89, Dec. 31, 1914, pp. i–xi, 1–143, pls. 1–37, figs. 1–73.

In this work a detailed account of the complete skeletal anatomy of *Stegosaurus* is given, the descriptive part being preceded by a brief account of the discovery, plan of work, and fauna of the quarries from which the specimens were obtained.

The genus *Stegosaurus* is reviewed and redefined, and the following species described: *Stegosaurus stenops, S. sulcatus*, and a new species, *S. longispinus*. The type specimen of *Hoplitosaurus marshi* is described and figured in detail for the first time. The paper concludes with a brief discussion of the various life restorations of *Stegosaurus*. The article is based almost entirely upon specimens in the U. S. National Museum.

GILMORE, CHARLES WHITNEY—Contd.

——— On the genus Trachodon.

Science (n. s.), 41, No. 1061, Apr. 30, 1915, pp. 658–660.

The present use of the generic term *Trachodon* is discussed, the conclusion being reached that in its application *Trachodon* should be restricted to one of the forms from the Judith River formation; also that *Claosaurus annectens* Marsh should be regarded as a synonym of *Thespesius occidentalis* Leidy.

HAY, OLIVER P. The Pleistocene mammals of Iowa.

Iowa Geol. Surv., 23, 1914, pp. 1–662, pls. 1–75, figs. 1–142.

The various stages of the Pleistocene epoch are described. Iowa is apparently the only State in which has been demonstrated the presence of all four or five of the glacial stages. A section of the paper is devoted to a discussion of the character and distribution of the loess. The greater part of the report is made up of descriptions of the vertebrates, altogether mammals, which have been reported from the Pleistocene of the State. Of these mammals about 40 species are known. Many of the specimens described and figured are the property of the U. S. National Museum.

This paper accompanies the Annual Report of the State Geologist for 1912.

HAY, OLIVER P. Contributions to the knowledge of the mammals of the Pleistocene of North America.

Proc. U. S. Nat. Mus., 48, No. 2086, Apr. 8, 1915, pp. 515–575, pls. 30–37, figs. 1–5.

Describes a new species of bison, *Bison sylvestris*, from Ohio; a new species of musk-ox, *Boötherium nivicolens*, from Alaska; *B. sargenti* Gidley, from Michigan; a new species of horse, *Equus hatcheri*, from Nebraska; and a new species of horse, *E. francisci*, from Texas. Much of the paper is occupied by measurements made on the skulls of various species of equids, having in view the determination of the extent of variations in the wild species. Application is made of the results to determine the origin of the supposed composite species, *Equus caballus*.

SCHUCHERT, CHARLES. Revision of Paleozoic Stelleroidea with special reference to North American Asteroidea.

Bull. U. S. Nat. Mus., No. 88, Mar. 20, 1915, pp. 1–311, pls. 1–38, figs. 1–41.

This monograph contains an exhaustive study of all known Paleozoic Asteroidea and Auluroidea, and a shorter presentation of the Ophiuroidea. The first 51 pages are devoted to a discussion of the terminology, development and evolution of Paleozoic Stelleroidea, the remainder dealing with the detailed descriptions of genera and species. A complete bibliography is included. Based largely upon the collections in the U. S. National Museum, particularly the Harris and Ulrich collections.

SHUFELDT, R. W. Fossil birds in the Marsh collection of Yale University.

Trans. Connecticut Acad. Arts and Sci., 19, Feb., 1915, pp. 1–109, pls. 1–15.

Revised determinations are given of the species and genera described by the late Prof. O. C. Marsh, and the following new species are proposed: *Telmatornis rex, Botauroides parvus, Eocecornis ardetta, Falco falconella, Grus marshi, Colymbus oligoceanus, Larus pristinus, Limicolavis pluvianella, Phalacrocorax marinavis, P. mediterraneus, Phasianus americanus, P. miocenus, Sula atlantica, Melcagris richmondi, Tympanuchus lulli, Colinus catoni, Gavia pusilla*, and *Phasianus alfhildæ*. *Botauroides, Eoccornis, Minerva* and *Limicolavis* are new genera.

SHUFELDT, R. W.—Continued.

——— New light on the great toothed divers of America.

Sci. Amer. Suppl., 79, No. 2038, Jan. 23, 1915, pp. 52, 53, figs. 1–5.

An account of the toothed birds of the Cretaceous beds of Kansas, prompted by the discovery of a fossil vertebra of a bird in the Clagett formation (Judith River) of Montana. The specimen referred to is in the U. S. National Museum, and will be figured later in The Auk.

WALCOTT, CHARLES D. Cambrian geology and paleontology, III. No. 2.—Pre-Cambrian Algonkian algal flora.

Smithsonian Misc. Colls., 64, No. 2, July 22, 1914, pp. 77–156, pls. 4–23.

A preliminary paper on a fossil algal flora from the Algonkian formations of the Cordilleran area of western America. Algonkian algal flora is correlated with modern blue-green algae. An outline of Algonkian geologic continental conditions and sedimentation, and a biologic discussion of the algal flora and the traces of contemporaneous aquatic fauna. Suggests the algae as the explanation of immense reefs or banks of Algonkian limestone, and bacteria as the agent in their formation. Describes 8 new genera of Algonkian algae, with 12 new species described and illustrated, and other descriptions and illustrations of modern algal flora.

WALCOTT, CHARLES D. The Cambrian and its problems in the Cordilleran region.

Problems of American Geology, Yale University Press, New Haven, 1915, pp. 162–233, pls. 1, 2, figs. 1–8.

Based on a lecture delivered by Dr. Walcott at Yale University in 1913. Reviews the stratigraphic and faunal conditions of western North America preceding and during Cambrian time, discusses source of Cambrian Cordilleran faunas, gives comparative lists of faunas of the three Cambrian periods, and suggests ten problems not yet wholly solved.

WALCOTT, CHARLES D.—Continued.

——— Discovery of Algonkian bacteria.

Proc. Nat. Acad. Sci., 1, Apr., 1915, pp. 256–257, figs. 1–3.

Records announcement of discovery of pre-Paleozoic bacteria in connection with algal deposits in Newland limestone. Compares by illustration ancient and modern forms of bacteria.

EXPLORATIONS AND FIELD WORK.

BIGELOW, HENRY B. Oceanography and plankton of Massachusetts Bay and adjacent waters, November, 1912–May, 1913.

Bull. Mus. Comp. Zoöl., 58, No. 10, Nov., 1914, pp. 385–419, 1 pl.

Describes the results of physical observations of the waters of Massachusetts Bay, with a brief reference to the plankton collected. This work was carried on with the steamer "Blue Wing" of the Bureau of Fisheries and in cooperation with that bureau.

SCHMITT, WALDO L., E. C. JOHNSTON, E. P. RANKIN and EDWARD DRISCOLL. Survey of the fishing grounds on the coasts of Washington and Oregon in 1914.

Report, U. S. Commissioner of Fisheries, 1914, pp. 1–30, 1 pl., 2 maps.

Accounts of explorations mainly by the steamer "Albatross" of the Bureau of Fisheries in 1913 and 1914.

Explorations and field-work of the Smithsonian Institution in 1913.

Smithsonian Misc. Colls., 63, No. 8, Nov. 27, 1914, frontispiece, pp. 1–88, figs. 1–87.

This paper contains notes on the following expeditions, the most of which resulted in the acquisition of material for the

Explorations and field-work—Contd.

Museum collections: Geological explorations in the Canadian Rockies; Geologic history of the Appalachian Valley in Maryland; Collecting fossil echinoderms in Illinois; Further exploration of the Cumberland Pleistocene cave deposit; A fossil hunting expedition in Montana; Life zones in the Alps; Dr. Abbott's expedition in Dutch East Borneo and Cashmir; Marine invertebrates from the "Eastern Shore," Va.; Experiments with Cerions in the Florida Keys; Bird studies in Illinois; Fishes from the region of Quaternary Lake Lahontan; Cactuses and desert plants from the West Indies and southwestern United States; Plants from southwestern United States; The flora of western North Carolina; Ancient mica mines of North Carolina; Anthropological exploration in Peru; Archeological explorations in western New Mexico; Antiquities of the West Indies; Among the East Cherokee Indians of North Carolina; Ceremonial dances of the Creeks in Oklahoma; Ceremonies and rituals of the Osage; A study of Sioux music; Strange rites of the Tewa Indians; Notes on the Alsea and Kalapuyan Indians; Field-work among the Catawba, Fox, Sutaio, and Sauk Indians; Expedition of the Astrophysical Observatory.

Explorations and field-work of the Smithsonian Institution in 1914.

Smithsonian Misc. Colls., 65, No. 6, June 30, 1915, pp. 1–95, pl. 1, figs. 1–89.

This paper contains notes on the following expeditions, the most of which resulted in the acquisition of material for the Museum collections: Geological explorations in the Rocky Mountains; Studies in coastal plain stratigraphy and paleontology; Explorations for fossil echinoderms in western New York; Fossil collecting at the Cumberland cave deposit; Hunting vertebrate fossils in Montana; Stratigraphic studies in central Tennessee; Geology of certain areas in eastern Pennsylvania; Geological studies in New York State; Expedition to Borneo and Celebes; Expeditions to the Far East; The "Tomas Barrera" Expedition in western Cuba; Experiments with Cerions in the Florida Keys; Bird studies in Illinois; Cactus investigations in Peru, Bolivia, and Chile; Botanical explorations in New Mexico and Texas; Collecting fossils on Chesapeake Bay; Anthropological investigations in Guatemala; Anthropological researches in Africa and Siberia; Preparation of exhibits illustrating the natural history of man; Prehistoric remains in New Mexico; Further study of the Cherokee sacred formulas; The sun and the ice people among the Tewa Indians of New Mexico; Work among the Iroquois; Osage songs and rituals; Preservation of Indian music; Ethnological researches among the Kalapuya Indians; Investigations among the Stockbridge, Brotherton, and Fox Indians; Studies of solar radiation.

Explorations and field-work—Contd.

EXPOSITION.

The exhibits of the Smithsonian Institution at the Panama-Pacific International Exposition, San Francisco, California, 1915, pp. 1–120, 5 illustrations, press of H. S. Crocker Co., San Francisco Cal., 1915.

A catalogue of the exhibits of the Smithsonian Institution and its branches, preceded by a brief account of its organization and activities.

BIOGRAPHY.

Dall, William Healey. Spencer Fullerton Baird, a biography, including selections from his correspondence with Audubon, Agassiz, Dana, and others.

J. B. Lippincott Co., Philadelphia and London, Apr., 1915, pp. i–xvi, 1–462, with 19 illustrations.

A biography of the first assistant secretary in charge of the U. S. National Museum and second Secretary of the Smithsonian Institution.

Dall, William Healey—Continued.

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